DOCUMENT RESUME

ED 207 644 JC 810 564

AUTHOR	Morris, William; And Others
TITLE	Student Accountability Model (SAM) Operations Manual.
INSTITUTION	California Community Colleges, Sacramento. Office of the Chancellor.; Los Angeles Community Coll. District, Calif.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
PUB DATE	Jul 81
NOTE	98p.; Revised edition of ED 135 443.
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Community Colleges; Employers; *Followup Studies; *Occupational Surveys; Questionnaires; Research Design; Research Utilization; Sampling; Vocational Education; *Vocational Followup
IDENTIFIERS	California; *Student Accountability Model (California)

ABSTRACT

This manual presents a system of precedures constructed to improve occupational student follow-up in California community colleges. First, introductory material describes the development of the Student Accountability Model (SAM) project; presents two levels of guidelines for the system--essential and highly desirable; and enumerates assumptions about effective follow-up procedures and information needs. The next chapters describe the two components of the model: (1) the Student Accounting Component, which includes procedures for classifying courses, identifying student majors, and obtaining academic year unduplicated enrollment counts; and (2) the Student Follow-Up Component, which recommends procedures for obtaining information about students who have left college. Chapter IV covers follow-up procedures and techniques and the use of SAM information in program planning and evaluation. This two-part chapter covers both student and employer follow-up. Chapter V discusses the use of SAM for meeting Vocational Education Data System (VEDS) requirements. The manual is appended by a discussion of sampling in follow-up studies; examples of survey instruments; and a listing of the members of the SAM consortium of 12 community colleges. (AYC)

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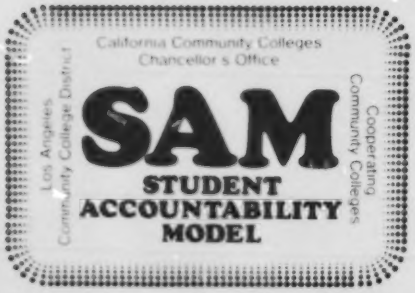

OPERATIONS MANUAL

JULY 1981

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P R E F A C E

This manual describes a system of procedures (or model) constructed for the purpose of improving occupational student follow-up in California community colleges. The model was developed by a consortium of twelve leaders in California Community Colleges, including occupational and general administrators, researchers, and data processing specialists. Input was solicited from other colleges and from staff of the Chancellor's Office.

It became evident early in the project that a fundamental component in the model would have to be a uniform method for classifying occupational majors so that non-continuing students could be categorized for various approaches to follow-up. This manual describes recommended procedures for accomplishing these objectives and suggests methods for obtaining useful information about occupational students during and after their stay in college.

This edition of the manual is the third revision of the original 1974 document. It incorporates many suggestions offered to improve the model, and features its application to the new federal Vocational Education Data System (VEDS).

It is hoped that the manual will be of assistance to the colleges in (1) evaluating and planning their occupational programs and in (2) completing required enrollment and follow-up forms related to vocational education.

BKG
7/1/81

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I • INTRODUCTION

It is almost universally agreed that information from and about students after they leave college is important to a college in evaluating its program and in planning for the future. It is also almost universally agreed that the task of obtaining "follow-up" information that is reliable, valid, and useful is a difficult one.

Two developments in recent years have added credence to the above statements, particularly in regard to occupational students in community colleges: (1) the 1968* amended Vocational Education Act, PL 90-576, requires that colleges receiving funds under the Act report each year, among other things, numbers of students who have completed occupational programs and found employment in the field for which they were trained; and (2) Project COPES (Community College Occupational Programs Evaluation System, funded by the California Community Colleges Chancellor's Office), in their May 1973 report, indicated that "systematic follow-up of students who have completed occupational programs" had the lowest mean rating of all sixty items used in the evaluation procedure of eight colleges selected in a stratified random sample of all California public community colleges.

These developments, along with an awareness of significant changes taking place in student populations, in instructional methodologies, and in functions and general philosophy of the community college, led the Chancellor's Office to draft a tentative proposal for a project to improve occupational student follow-up.

In March 1973, under the leadership of Dr. William Morris, the Chancellor's Office invited representatives of six California community colleges, with each person selected for his specialized skill and/or experience in research projects concerning follow-up and reporting practices, to meet and critique the proposal. Out of this meeting grew a detailed plan for a project to design and implement a system (or systems) for follow-up of community college students.

The Project (later dubbed SAM: Student Accountability Model) was funded in August 1973. Dr. Ben Gold, Research Director at Los Angeles City College, was asked to coordinate project activities, in consultation with Dr. William Morris, and the Los Angeles Community College District agreed to provide fiscal management.

*Revised in 1976--see Chapter V.

A basic assumption pertinent to implementation of the project was that any system to be workable and acceptable to the colleges must be developed with continual guidance from community college personnel.

Thus, the first step was the formation of a twelve member consortium, with individual members chosen to represent large and small colleges, northern and southern colleges, and expertise in the areas of occupational administration, general administration, data processing and institutional research. (Consortium members are listed in Appendix D).

The fundamental task of the project was agreed to be that of developing a model to accomplish the following purpose:

> To provide a system of procedures for identifying and describing California community college occupational students and for obtaining information about them after they leave college, in order to satisfy two needs:
>
> 1. completion of reporting forms required for governmental agencies, and
>
> 2. program evaluation and planning.

Visits to a statewide sampling of colleges during the early planning stages revealed a wide variety of practices in obtaining quantitative information regarding occupational program enrollments and subsequent job placements. These visits also produced data (and opinions) concerning needs and operating constraints within individual colleges. As a result of these visits, the following sets of guidelines and assumptions were developed as bases for construction of the model.

Guidelines for the System: Essential

1. System must be adaptable to any California community college and to all occupational programs offered by the college.

2. Operation of system must be sufficiently simple so that outside expertise is not required after initial implementation.

3. System must lend itself to electronic data processing but be adaptable to manual operations.

4. System must maximize the use of current college staff and minimize the necessity for hiring additional personnel.

5. System must be ongoing, not "one-shot."

6. Any alternative sub-systems must provide substantially equivalent information.

7. System must provide necessary information for Vocational Education enrollment and follow-up forms with a high level of accuracy and on time.

8. System must provide pertinent evaluation and planning information to occupational administrators and faculty.

9. System must indicate enrollments as of the census week in the semester (quarter) concerned, but must also provide flexibility for specially scheduled courses.

10. Data collection instruments must be easily readable, require a minimum of time for completion, and be in a format easily adaptable to electronic data processing.

Guidelines for the System: Highly Desirable

System should:

1. be expandable to include students other than occupational students.

2. provide for employer as well as employee input.

3. provide for long term as well as short term follow-up.

4. require a minimum of effort for colleges to "retool" from existing systems.

5. not in any way imply that other methods of program evaluation are less important.

6. build on existing research information.

7. adapt with minimum difficulty to changes in reporting requirements.

8. provide estimates of any sampling and/or response bias.

9. provide additional information useful to college counseling staff.

10. provide additional information useful to college placement office.

Some Assumptions and Inferences

1. Colleges need a system such as proposed in this project.
   Inference: Colleges will be committed to participation and support of the project.

2. No system for identifying student majors can be 100% accurate.
   Inference: Project should determine what accuracy is reasonable and model should assure that accuracy.

3. Difficulty in student major identification decreases the longer the student stays in college.
   Inference: Project accuracy rates should vary with groups involved.

4. No sizable follow-up procedures can produce 100% response.
   Inference: Project should determine what response rates are acceptable and under what circumstances.

5. Difficulty in contacting former students increases the longer they are away from college.
   Inference: Target response rates should be expected to vary with groups involved.

6. A workable system requires input from those "close to the scene."
   Inference: Occupational faculty, department or division chairpersons, and counselors should be involved in the system.

7. Follow-up information about students who have completed considerable work at the college is more useful in program evaluating and planning than that about students who have completed little or no work.
   Inference: While short-tenure students should certainly not be ignored, more effort should be expended on the follow-up of long-term students.

8. Specific objectives of follow-up studies may differ among colleges and among groups within a college.
   Inference: Specific objectives for follow-up studies should be determined before the study design is finalized; over-all system must be flexible enough to adapt to differing objectives.

9. Student attitude is an important factor in follow-up response rates.

   Inference: Efforts should be made to prepare students for follow-up requests, preferably before they leave the college.

10. A large follow-up response from a representative sample is preferable to a small biased response from an entire group.

    Inference: Repeated efforts to obtain responses should be made.

To meet these guidelines and assumptions, the model was envisioned as having two components: (1) the Student Accounting Component, in which occupational students are operationally defined and classified according to criteria which are both adequate and simple to apply, and (2) the Student Follow-Up Component, in which occupational students no longer in college are categorized and procedures recommended for obtaining information about them, with details of the procedures depending on the category.

II • STUDENT ACCOUNTING COMPONENT

In the Student Accounting Component, occupational courses are classified by assigning priority letters and major code numbers (described below); a student's major is then defined according to the occupational courses in which he or she enrolls.

The most critical aspect, therefore, of the entire model is the careful classification of occupational courses.

A. Classification of Occupational Courses

1. Definition of Occupational Course

An occupational course is defined as one which is (all three):

a. intended to develop skills and related knowledge for job performance.

b. part of the course sequence of an occupational program* offered by the college.

c. designed primarily for job preparation and/or upgrading or updating and not for general education purposes.

Prior to each semester, the occupational administrator (or delegate) should examine all courses offered by occupational departments, and assign to each a priority letter and major code number, as described on the following pages.

*In certain (rare) cases, a single course may be considered to be an occupational program (when it is the only course necessary for entry level employment).

2. Assigning Priority Letters

Each course offered by occupational departments should be assigned a "priority" code describing the degree to which a course is "occupational," as follows:

Priority "A" - Apprenticeship

Course is an apprenticeship course.

Priority "B" - Advanced Occupational

Priority "B" courses are those taken by students in the advanced stages of their occupational programs. A "B" course is offered in one specific occupational area only, clearly labels its taker as a major in this area, and enrollment in the course is open only to majors in this area. In most cases, no more than two courses in any one program should be labeled "B".

Priority "C" - Clearly Occupational

Priority "C" courses will generally be taken by students in the middle stages of their programs and should be of difficulty level sufficient to detract "drop-ins." A "C" level course will often be offered in several specific occupational majors within a broad area. The "C" priority, however, should also be used for courses within a specific program area when the criteria for "B" classification are not met.

Priority "D" - Possibly Occupational

"D" courses are those taken by students in the beginning stages of their occupational program. The "D" priority can also be used for service (or survey) courses for other occupational programs. For borderline courses (between C and D), it is suggested that the deciding factor should be an estimate (based on judgment and experience), of the number of students taking the course whose major is judged to be occupational. If the number is estimated to be 75% or more of the total, the course should be identified as Priority "C", otherwise priority "D".

Priority "E" - Non-Occupational

Although offered by occupational departments, "E" courses are designed for non-occupational majors who desire acquaintance with the field as part of their general education.

In addition to the above, letters F and beyond* may be used to identify special courses, e.g., Useful Homemaking, Work Experience. It is suggested that Work Experience be given a higher occupational priority only if it is clearly part of an occupational curriculum.

Also, it should be noted that in this model there is no operational distinction between A and B priority courses. Separate identification is included for those colleges which may wish to study their apprenticeship courses separately, and for reporting forms requesting separate apprenticeship information.

In making decisions as to which priority to assign a course, note that there are three factors to be considered:

a. the degree to which the course identifies its taker as an occupational major.

b. level of the course in an occupational program.

c. percent of students taking the course who are judged occupational majors.

It is recommended that the following guidelines be used:

Factor	PRIORITY LEVEL			
	A or B	C	D	E
1. Ability to identify major	Clearly labels taker as a major in specific occupational program.	Indicates the taker is an occupational major. May be in a specific program or a broad area.	Suggests that taker is possibly an occupational major. Area may not be known.	Indicates taker to be a non-occupational major.
2. Course Level	Advanced occupational (B) Apprenticeship (A)	Second level occupational	Introductory occupational	Introductory non-occupational
3. Expected number of occupational majors in class	100%	75% or more	Below 75% but above 25%	25% or below

*letters beyond M should be reserved for Chancellor's Office use.

For a course to be assigned a particular priority letter, it should meet each of the three criteria for that priority or for a higher one. Thus, for a course to receive an "A" or "B" priority it should be an advanced level occupational course limited to majors in a specific occupational program.

For a course to receive a "C" rating, it could be any one of the following:

a. a second level or advanced level occupational course required in several specific majors within a broad area.

b. an advanced level occupational course designed for one specific major, but which permits a significant number of non-majors to enroll.

c. a course limited to majors in one specific occupational program but not of advanced level.

Any other course which attracts students of whom at least one-fourth may be judged occupational majors (by some standard) should be labeled "D" priority.

Following are some examples (for illustrative purposes only) of possible classifications of courses. Priorities indicated are those which would probably be assigned by most colleges offering the named courses. Examples of courses which might be difficult to classify are also included.

A. Apprenticeship Courses

Carpentry, Plumbing, Machine Shop

B. Courses Which Indicate a Specific Major (Advanced Occupational)

Dental Pathology, Advanced Video Tape, Advanced Applied Acting, Legal Secretarial Procedures, Contact Lens Laboratory, Advanced Radiology Technology, Fire Hydraulics, Livestock and Dairy Selections, Real Estate Finance, Cost Accounting.

C. Courses Which Indicate a Broad Area Major (Clearly Occupational)

Soils, Credits and Collections, Principles of Advertising, Air Transportation, Clinical Techniques, Principles of Patient Care, Food and Nutrition, Sanitation/Safety, Shorthand, Small Business Management, Advanced Typing, Technical Engineering, Vacuum Tube Theory, Fundamentals of Air Conditioning, Basic Electricity

D. Courses Which May Indicate Occupational Major (Possibly Occupational)

Technical Mathematics, Graphic Communications, Elementary Mechanical Principles, Fundamentals of Electronics, Typing (Beginning or Intermediate), Accounting (Beginning).

E. Survey or Exploratory Courses (Non-Occupational)

Introduction to Home Economics, Introduction to Business, Introduction to the Theater.

It should be emphasized that the above are illustrations only. Course title alone is not sufficient to determine course priority as courses with the same title but at different colleges may be quite different in content.

It should also be emphasized that a priority rating of an occupational course has no relationship whatever to any type of evaluation of the course. The sole purpose of a priority letter assignment is to assist in identifying occupational program majors.

Following are some hypothetical examples of courses which might present difficulty in assigning priority letters:

a. Math AAA, an elementary course limited to Electronics Technician majors, taken usually in the first semester.

   Since this course is an elementary level course, it should not be classified as "B" priority, even though the course clearly labels the taker as a major in a specific occupational area and 100% of the students taking the course can be expected to be occupational majors. If the course can be considered second level (or higher), "C" level might be appropriate, but "D" is probably the better choice.

b. Math BBB, an advanced level course limited to Electronics Technician majors.

   This course meets the requirement for "B" level priority. Since the major certainly includes at least 2 other "B" level courses, however, a "C" priority is probably more appropriate.

c. Anatomy CCC, a course in general anatomy but reserved primarily for Nursing (AA degree) students.

   This course could qualify for a "C" priority if 75% or more of the students are Nursing (or other 2 year health curriculum) students. If more than 25% but less than 75% are Nursing students, priority "D" is appropriate; if 25% or less, course should be classified as non-occupational.

d. Typing DDD, a beginning course in general typing.

   If more than 25% of the students are judged to be occupational majors, the appropriate priority is "D"; otherwise "E".

e. Accounting EEE, a course in Principles of Accounting.

   This is another course which might be assigned "C", "D", or "E" priority, depending upon the level and make-up of students taking the course.

2. Assigning Major Code Numbers

In addition to assigning a priority letter, the occupational administrator (or delegate) should assign a major code number to each course.

The numbers assigned can be those used in the Taxonomy of Occupational Programs (TOP) provided by the California Community College Chancellor's Office, or other code preferred by the college. However, in reporting enrollments to the Federal Government, the USOE Voc-Ed Code is currently required and therefore recommended, although the State Chancellor's Office provides a TOP-USOE equivalency table.

Federal reporting requires six digit (USOE) coding (2 digits before the decimal for broad area, 4 digits following the decimal for specificity). In preparation for VEDS requirements described later in this manual, priority A*, B, and C classes should be assigned a six digit USOE code. For A and B courses, the six digit priority is in most cases clearly identifiable. For C courses, judgment and experience may have to be called upon for the most appropriate assignment. Two digit USOE code is adequate for D level courses, except that broad area occupational Home Economics courses should be assigned 09.02, to differentiate clearly from Consumer and Homemaking Education courses assigned 09.01.

Some difficulty in assigning USOE code numbers to courses will be met, simply due to the fact that the USOE numbers are indicators of occupational programs, rather than courses. Those assigning USOE numbers to courses must therefore consider the most appropriate program to which the course belongs and make the assignment accordingly.

*2 digit for Apprentices suffices for VEDS reporting.

B. Identification of Occupational Student Majors

For the planning and evaluating purposes of this model, student majors are classified four ways:

Class 1 - Occupational major, specific major determined.

All students enrolled in one or more courses labeled A or B.

Class 2 - Occupational major, broad area determined.

All students who are not enrolled in any course labeled A or B, but are enrolled in one or more courses labeled C.

Class 3 - Occupational major, area not determined.

All students who are not enrolled in any course labeled A, B, or C above, but who are enrolled either in (a) one course labeled D and a total of 7 units or less, or (b) two or more courses labeled D.

Class 4 - Non-Occupational major.

All students not classified above.

In some cases, assignment to a particular major may require additional decision making, e.g., a student placed in class 2 because of enrollment in two "C" priority courses having different 6 digit codes. In such a situation, the college should determine which of the two codes to be assigned to the student, either by asking the student, or by arbitrary assignment. This situation should not arise for class 1 students, as priority "A" or "B" courses, when properly assigned, limit enrollments to majors in the indicated specific area. Since class 3 requires 2 digit identification only, the problem of enrollment in two majors will occur only rarely, and can be solved by arbitrary assignment.

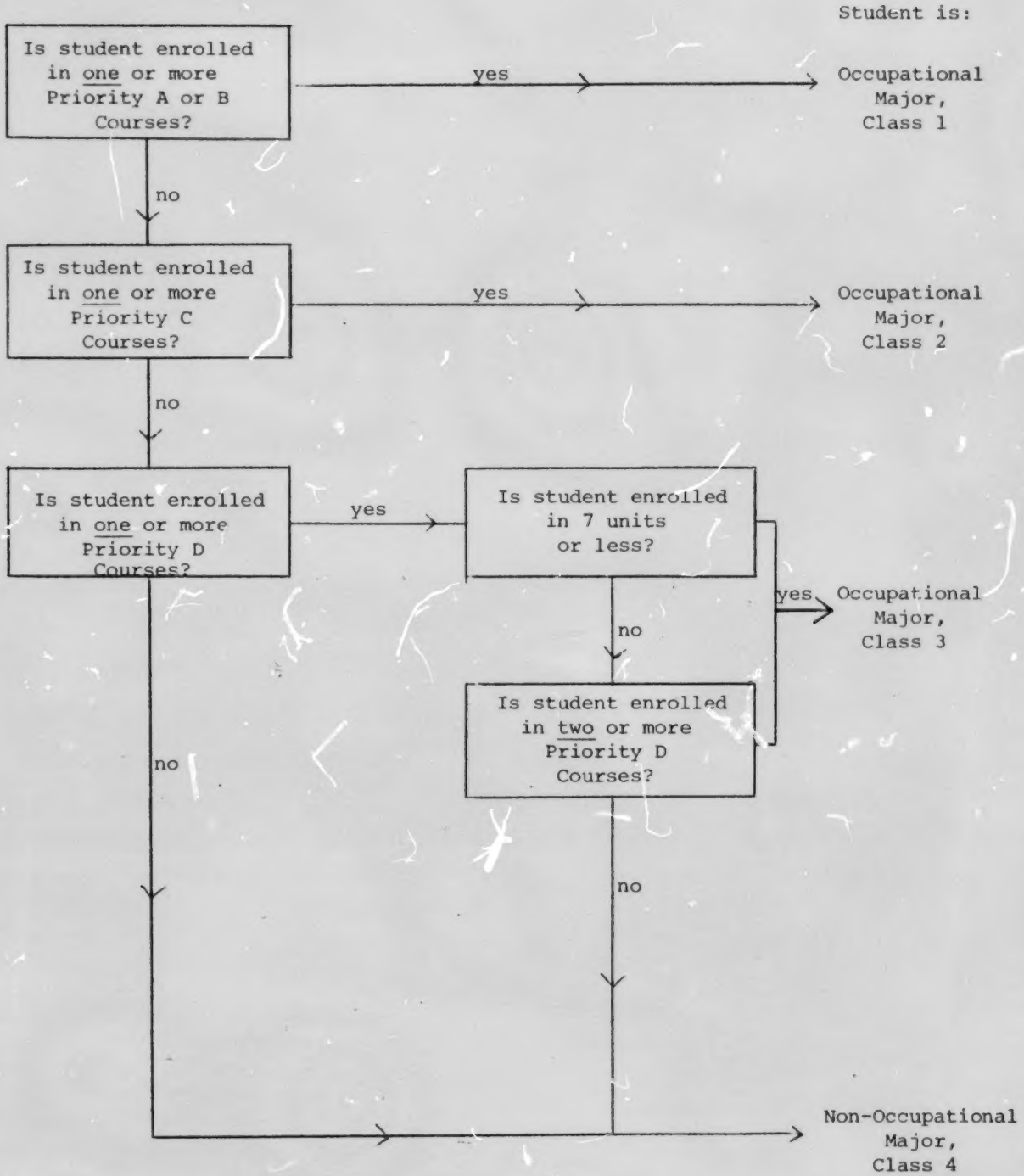
An unduplicated listing of occupational students (OML) and their assigned SAM majors can now be prepared (shortly after census week for each semester (or quarter)).

Note that part-time, full-time or day, evening distinctions are not made. Procedures for identification of student majors should be applicable to all these groupings.

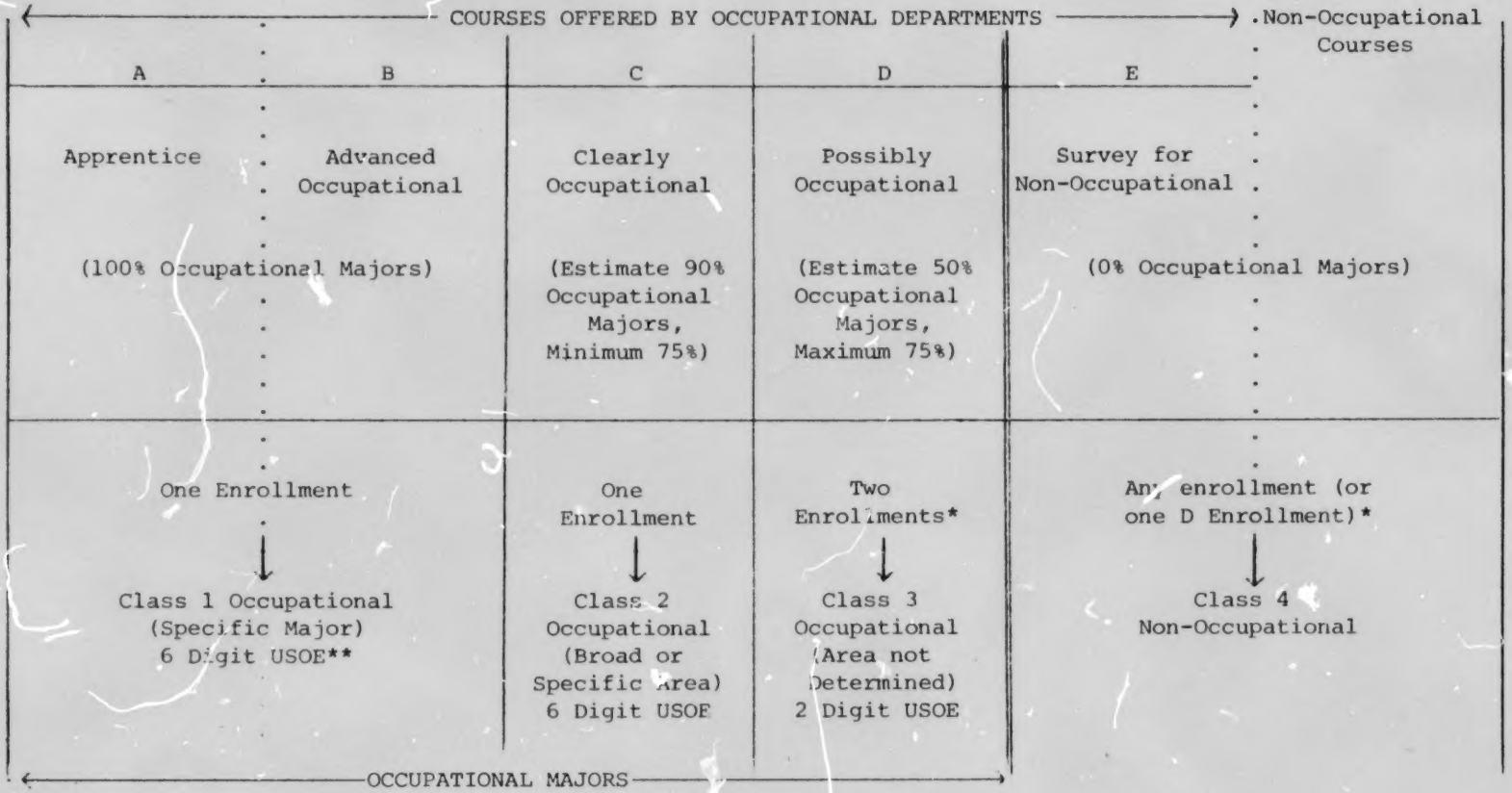
On pages 16 and 17 are a flow chart indicating the method for placing students in the appropriate classes, and a tabular presentation indicating the steps in classifying courses and determining student majors.

Follow-up techniques to be described later depend heavily on proper placement of students into the four classes, and we emphasize again the importance of careful classification of courses.

DETERMINATION OF STUDENT MAJOR


Student is:
Is student enrolled in one or more Priority A or B Courses?
yes
Occupational Major, Class 1
no
Is student enrolled in one or more Priority C Courses?
yes
Occupational Major, Class 2
no
Is student enrolled in one or more Priority D Courses?
yes
Is student enrolled in 7 units or less?
yes
Occupational Major, Class 3
no
Is student enrolled in two or more Priority D Courses?
no
no
Non-Occupational Major, Class 4

USING COURSE CLASSIFICATION TO DETERMINE STUDENT MAJOR



*One D enrollment qualifies a student for Class 3 if his total enrollment is 7 units or less.
**2 Digit for Apprentices suffices for VEDS reporting.

C. Academic Year Unduplicated Counts

Governmental reporting requirements often include obtaining unduplicated counts of students enrolled in an occupational program sometime during an academic year (for specific VEDS requirements, see Chapter V).

This unduplicated count reporting will require merging of Occupational Majors Listings for each semester, quarter, or summer session in the academic year being reported, and elimination of duplicate names.

In merging OML's for this purpose, it is possible that a student's major will change during the year. For example, a student might be identified as a Class 3 major in USOE 14.----. Office Occupations in the Fall semester and as a Class 2 major in USOE 14.0900, Typing and Related Occupations in the Spring semester.

The following guidelines are recommended for academic year counts of majors for students whose major changes during the year:

1. If the student is placed in the same class (1, 2, or 3) throughout the year, the most recent major (Spring rather than Fall) should be used.

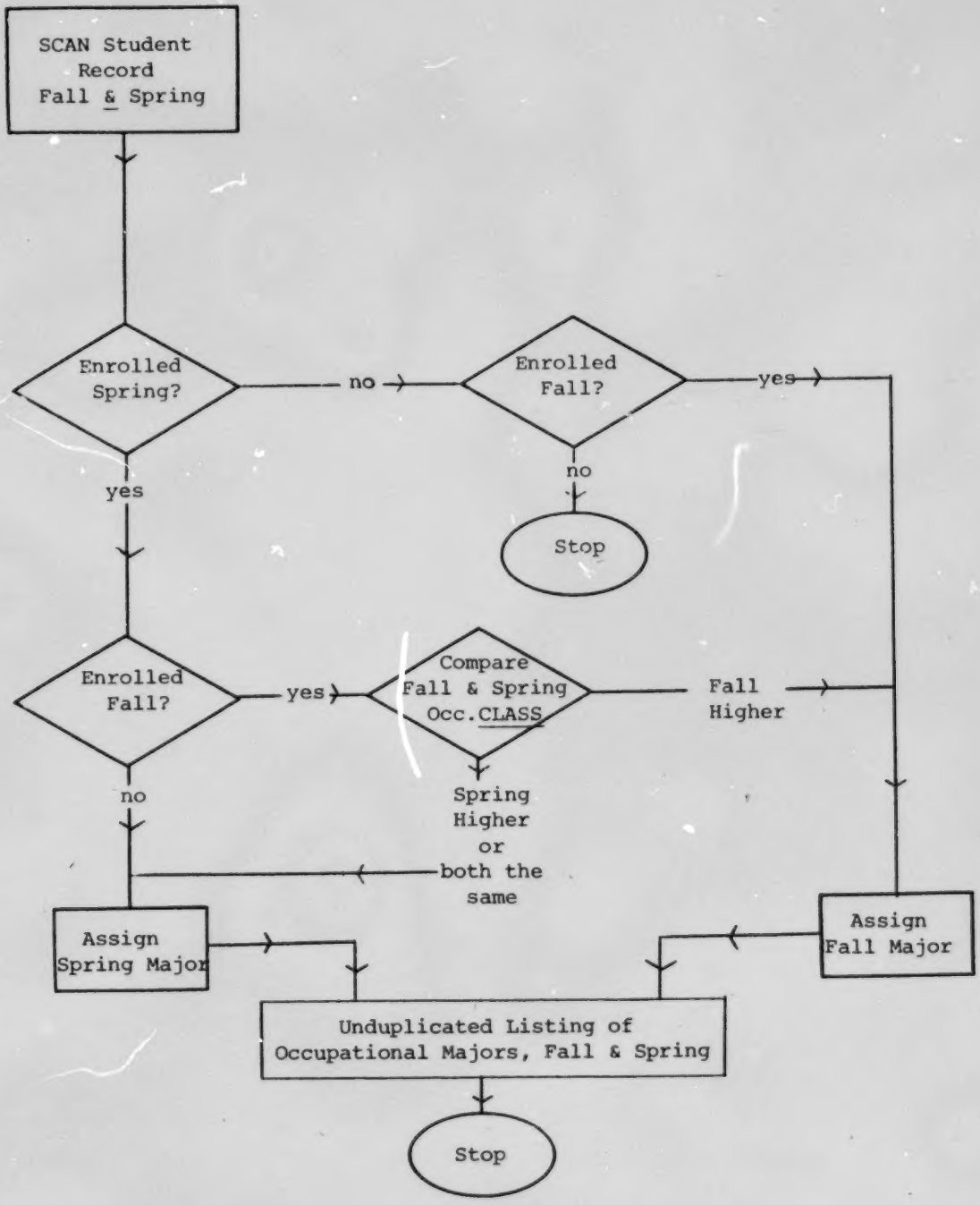
2. If the student is placed in different classes, the USOE program number for the higher ranked class (lower numerically) should be used.

Following are some examples:

	FALL		SPRING		USOE #
Student	Class	USOE #	Class	USOE #	to be reported
#1	3	14.----	2	14.0900	14.0900
#2	1	16.0103	4	Non-Occ.	16.0103
#3	4	Non-Occ.	3	04.----	04.----
#4	2	17.0400	3	14.----	17.0400
#5	3	04.----	3	09.0201	09.0201
#6	3	14.----	1	14.0201	14.0201
#7	2	04.1900	2	01.0300	01.0300
#8	1	07.0301	2	07.0800	07.0301

The flowchart on page 19 indicates a method of obtaining unduplicated major counts for a two term academic year. Additional, but similar procedures should be applied if the academic year contains more than two terms.

Flow Chart for Determining Unduplicated Occupational Majors Count, Fall and Spring Semesters



III • STUDENT FOLLOW-UP COMPONENT

In the Student Accounting Component, student occupational majors are identified and students placed in one of four classes, depending on the degree of certainty with which the major is determined. Procedures for accomplishing this classification were described in Chapter II.

When the student leaves the institution, an additional dimension to the classification is added, viz., the student's accomplishments while in college.

The Student Follow-Up Component described below explains the procedure for obtaining the two-dimensional Follow-Up Matrix consisting of twenty cells (4 class levels by 5 accomplishment levels)(See page 24.)

The approach to obtaining follow-up information about a student who has left college will depend upon his location in the Follow-Up Matrix. For example, a student who leaves the college after completing a full two-year occupational program would undoubtedly be able to provide more useful feedback information for program evaluation purposes than a student who enrolled only in one course and left after attending only a few class sessions. Thus, different approaches to obtaining follow-up information are suggested, depending on cell location in the matrix.

A. Classification of Previous Year Students

After the Fall semester (quarter) first census week, current semester enrollments should be compared with enrollments the previous year (either Fall or Spring or both). The following definitions pertain:

Continuing student:	student enrolled both currently and during the past year
Non-Continuing student:	student enrolled during the past year, but not currently

Non-Continuing students are further classified as one of the following, depending on accomplishment during the previous year:

Graduate (G)	received Associate Degree
Certificate (C)	received program certificate
Achiever (A)	does not qualify as graduate or certificate but:
Priority A or B	completed one or more priority A or B courses
Priority C	completed one or more priority C courses (no A or B)
Priority D	completed one or more priority D courses (no A, B or C)
Non-Occupational	completed seven or more units (no A, B, C or D)
Partial Completer (P)	completed some work but does not qualify as graduate, certificate, or achiever
Non-Completer (N)	does not qualify for any of the above

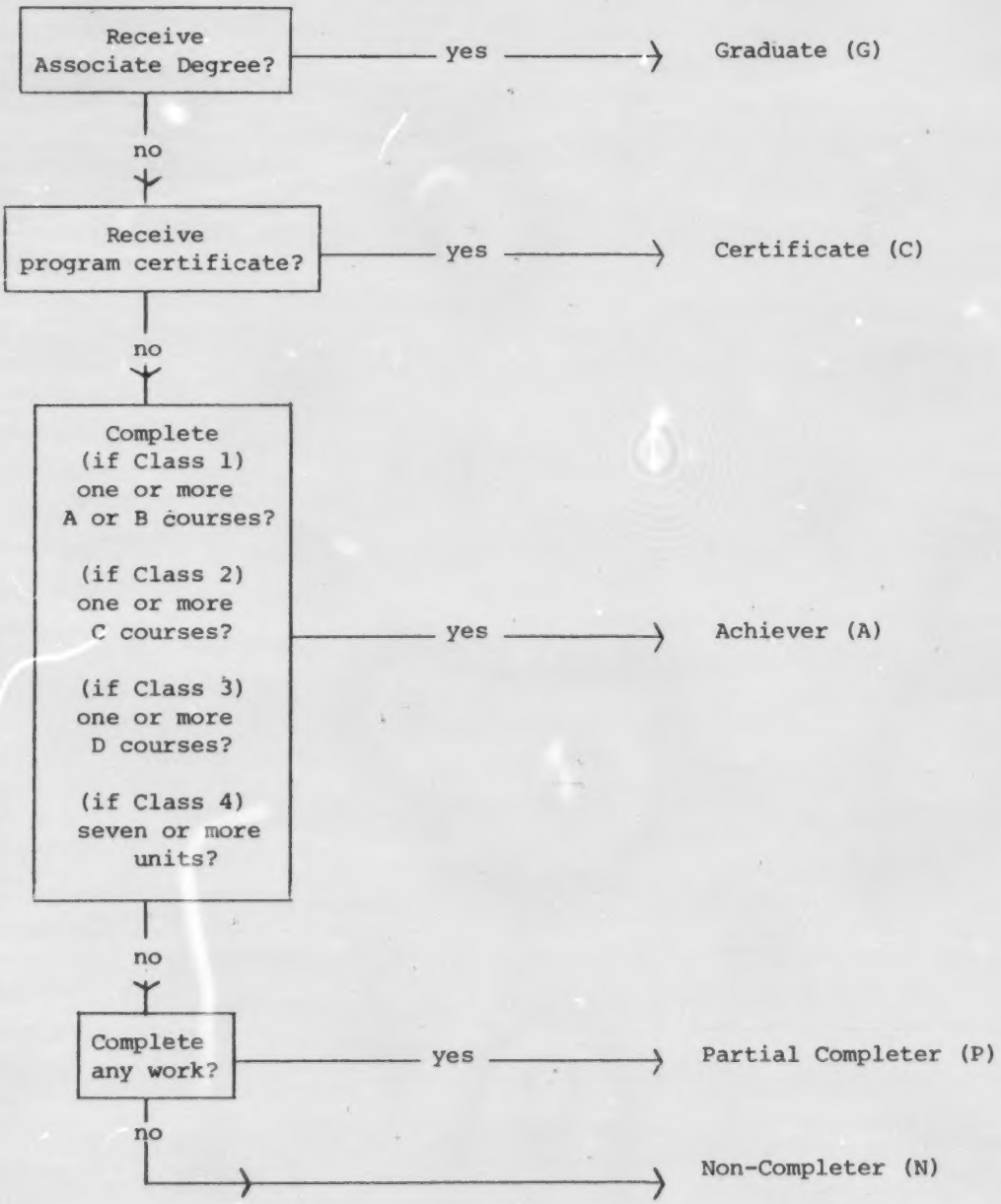
On page 23 is a flowchart indicating the method for placing each non-continuing student into the appropriate cell of the "follow-up matrix," sketched on the following page, 24.

Note that columns in the matrix are assigned to all students each semester as described in Chapter II, while rows are assigned only to non-continuing students after they leave college.

Chapter IV will offer suggestions for developing follow-up plans for evaluation and planning purposes, using selected cells in the Follow-Up Matrix. Chafter V will discuss use of the matrix for identification of "completers" and "leavers" for reporting purposes.

CLASSIFICATION OF NON-CONTINUING STUDENTS
(Flow Chart)

During previous year did student:



B. The SAM Follow-Up Matrix

The following groups can now be identified for appropriate follow-up:

		Class 1 Specific Major	Class 2 Broad Area	Class 3 Area not Determined	Class 4 Non-Occupational Major
Graduate	G				
Certificate	C				
Achiever	A	Priority A or B	Priority C	Priority D	
Partial Completer	P				
Non-Completer	N				

←——OCCUPATIONAL MAJORS——→

28

C. The Student Master File

Chapter II (page 14) describes how to obtain a listing of occupational majors in the colleges. This listing (OML) is usually prepared immediately following the first census week of a semester (or quarter) and provides a list of occupational majors for that semester (or quarter).

The previous section (pages 21-24) describes how to obtain the SAM Follow-Up Matrix, which essentially lists occupational majors of the previous year who are no longer in college and in addition provides information about their accomplishments while in college.

Note that the OML is a "snapshot" taken, normally, immediately following the first census, but that it could be taken at any time. Federal reporting requires unduplicated counts of majors during the entire academic year. This requires merging OML's for all terms during that year and counting each student once only.

The Follow-Up Matrix on the other hand is an identification of major and college accomplishment for students no longer in college and would not normally change (during a semester) after the date a student is determined to be no longer in college (usually the first census week).

While both the Occupational Major Listing and the Follow-Up Matrix are essential in the SAM system, a third element is necessary if the SAM system is to be used to its potential. That element is the Student Master File (SMF).

The Student Master File (SMF) is a periodically updated file on each student in the college which indicates characteristics of the student necessary for identification of selected groups. A good SMF will include unchanging attributes of the student such as sex, birthdate, ethnic, high school record, place of birth. It will also include items which may change, such as address, telephone number, special needs, record at the college. Certain specific requirements for the SMF are required for VEDS reporting and detailed in Chapter V.

A good SMF should contain information about all students enrolled in a given semester, and should be updated to indicate any change in the items contained on the file, e.g., course enrollments, course completions and grades, withdrawal from college, attainment of degree or certificate, change in special need.

Items placed on the SMF will vary from college to college, depending on individual college perspective. However, for optimum use of SAM, the items indicated in Chapter V (pages 48-49) as essential for VEDS reporting should be considered a minimum list.

Recent increases in sophistication and decreases in cost of computer hardware have enabled some colleges to create a complete college history file on all students enrolled at any time. Maintenance of such a file permits a college to identify students who complete programs but continue in college (for general interest or other non-employment related reasons) and thus be included in a program completer universe. Because the Follow-Up Matrix includes non-continuing students only, these students would not be identified routinely as program completers. The history file also permits additional studies of various kinds, e.g., patterns of changes in major, a look at sporadically attending students, and other projects of a longitudinal nature.

D. Suggestions for Data Processing

Recent surveys have indicated a wide variety of computer hardware in use on California community college campuses. At least fourteen different manufacturers have provided computer equipment in a variety of configurations. This, coupled with the fact that considerable variation among colleges exists in the way computer files are set up and stored, indicates that a detailed set of computer programs for SAM is not appropriate. Previous editions of this Manual have included descriptions of and flow charts for programs used at selected colleges. Feedback has indicated that adaptation of these items to other colleges has been difficult without additional technical information, and they are therefore not included in this edition.

Instead, we offer the following general guidelines for automating the SAM procedures:

1. The following files should be maintained:

   a. Course Master File (CMF)

      A listing of all courses offered at the institution with priority letter and major identification numerical code indicated for every occupational course. File should be updated whenever courses are added or deleted or whenever course content changes indicate reexamination of assigned priority letter or major code. Please see Chapter II for details on classification of occupational courses.

b. Student Master File (SMF)

A listing of all currently enrolled students together with specified characteristics of the student, as described in the previous section.

2. The following programs should be prepared.

a. Program to determine student major.

SMF should be merged with CMF so that a program can be prepared to follow the flow chart for Determination of Student Major (page 16) and prepare the Occupational Majors Listing (OML) just after census week each semester (quarter).

b. Program to determine academic year unduplicated occupational enrollments.

OML's for each term of the year must be merged to obtain unduplicated counts for academic year for federal reporting (see flow chart page 19.)

c. Program to identify non-continuing students.

Fall semester SMF must be merged with enrollments of previous year to identify non-continuing students.

d. Program to prepare Follow-Up Matrix.

SMF must be examined for all non-continuing students immediately after Fall first census week to determine college accomplishment and place students in appropriate cells of matrix (flow chart page 23).

The above programs are minimum requirements for making the SAM system operational. Additional programs can be written to produce mailing labels for follow-up, to provide VEDS data in the required format, to analyze follow-up data by selected groups, and to accomplish a variety of other purposes.

IV • USING SAM FOR PROGRAM EVALUATION & PLANNING

The most important reason for implementing SAM is for program evaluation and planning. Accurate information about students enrolled in occupational education courses, their characteristics, needs and objectives, and performance patterns is collected through the SAM Accounting component. Such data is valuable in planning instructional courses and programs, scheduling, providing support services such as program advisement and career counseling, assistance for students with special needs, placement and recruiting.

Students who have completed a program, have left with marketable skills, or who have just "walked off" can be a source of good information about the instructional program and college services. This type of information is collected through the SAM Follow-Up component. The previous chapters, II and III, cover the Student Accounting and Student Follow-Up components. This chapter covers follow-up procedures and techniques and using SAM information for program planning and evaluation. Part A discusses Student Follow-Up and Part B, Employer Follow-Up. Chapter V discusses utilizing SAM to meet VEDS (Vocational Education Data System) requirements.

A. Student Follow-Up

1. When and Why

There may be an institutional plan for periodic follow-up studies for all students and all programs. This regularized approach to follow-up will dictate frequency and program selection. Generally, it is not practical to schedule annual follow-up studies for all programs. However, it is highly desirable to plan follow-up studies for each program at least once every three to five years. Such studies should coordinate with other evaluation plans for the college or for the program, e.g. self-study in preparation for accreditation, COPES (Community College Occupational Programs Evaluation System), in order to develop comprehensive planning and evaluation data.

Follow-up studies will normally be conducted after the first census week of the fall term. At that point, as noted in the previous chapter, the follow-up matrix can be utilized to identify the follow-up "universe". For many former students, this will

time the first follow-up contact at around six months after their leaving the college. Six months is enough time to find employment, gain some job experience, possibly get a promotion, or find that jobs in his/her field are not readily available. Such experiences all can help the former student provide valuable information for planning and evaluating the occupational program.

2. Choosing the Program for Follow-Up

Usually, there will be some flags that will indicate the time is right for in-depth study of a program. Watch for:

a. changing enrollment patterns

b. technological advances

c. low placements

d. new or developing programs or occupations

or a variety of other indicators that say detailed information is needed. These and other indicators will help determine the follow-up objectives.

3. The Follow-Up Team

Objectives for the study and the programs selected will help determine the persons that should be involved in the early stages of designing the study. An overall coordinator will be a key person and may be the Director of Institutional Research or Occupational Dean or their designate. Others such as faculty from programs selected for in-depth study, counselors, and special services personel such as placement may also be appropriate. It is essential that those who will be involved in the interpretation and utilization of the data be fully informed about the study and involved with its conduct. Since the ultimate goal is program improvement, the participation of key persons who will be instrumental in making warranted changes is essential.

4. Preparation of Students for Follow-Up

Researchers who have performed follow-up studies consistently report that preparation of students while still in college provides measurable and significant improvement in (1) response rate to mailed questionnaires, and (2) completeness and accuracy of responses. Efforts are apparently especially needed for young students and for non-completers.

Two types of preparation need to be planned for:

a. mechanical, involving such items as verifying and/or updating addresses, completing EXIT forms, and generally making sure that pertinent information is on file at the college while the student is there to provide it, and

b. psychological, or "conditioning" the student to respond to future requests for information.

Following are some suggestions:

a. to alert Class 1 or Class 2 majors (all categories except N), allow 10-15 minutes of time in each A, B, or C priority class shortly before the end of the term and:

   (1) inform students of possible future contacts, emphasizing,

      (a) college interest in individual's opinions
      (b) requirements for obtaining funds
      (c) opportunity to assist future students
      (d) no individual identification in any published reports

   (2) suggest student include the college among people to be notified about address changes--point out various benefits to the student when the college can maintain contact

   (3) if possible show student copy of questionnaire that may be received

   (4) obtain information about plans for next semester, current address of someone who will always know student's address. (See sample In-Class Questionnaire, Appendix B.)

   Note: It is possible to obtain considerable "follow-up" information before the student leaves college. For example, students who already have jobs lined up can provide employment information and thus be excluded from later mailings for that purpose.

b. to alert non-completers, institute a procedure encouraging exit interviews. At the same time the student withdraws obtain pertinent information and alert student to future possible follow-up requests. (See sample Exit Interview Form, Appendix B.) Although some students will just disappear, this number can be minimized by consistent college-wide efforts, e.g., announcements in registration packet, college newspaper, bulletin boards, etc. urging students to protect their records by following appropriate withdrawal procedures.

c. to alert others, send letter as soon as non-attendance is determined, explaining importance of feedback information and requesting student to:

(1) keep college advised of current address, and

(2) respond when contacted (see Follow-Up Alert Letter, appendix B.)

As in other aspects of the model, individual colleges and individual programs within a college may require different approaches. The suggestions listed above have been helpful to some colleges. The principle of preparation of students for follow-up while still in college has been demonstrated to be sound. It is strongly recommended that various procedures be tried with enthusiasm and creativity.

5. Use of Student Objectives

SAM implementation experiences have validated the assumption that students, generally, provide the least reliable data about their major. The student's major is more accurately determined through reviewing that student's enrollment patterns and specifically, courses taken. This procedure is inherent in the SAM Accounting component.

However, it has also been found that because of the great differences among community college students, e.g. age, background, goals, employment experiences, and a variety of others, information about the student's intention or objective for attending the college can be of value in planning for follow-up.

Separation of students according to their objectives offers several advantages, among them being flexibility in constructing questionnaires (e.g. different questions can be asked of those on the job who had the job before leaving college) and a possibly better basis for sampling larger groups, e.g. non-completers.

At registration each term, it is suggested that students be asked to indicate their objectives for attending the college.

The following form has been implemented by several colleges:

Suggested Statement of Intent Form

Please check one of the educational objectives which best describes the reason for your course selection this semester.

1. Pre-Employment training

   You should describe this as your educational objective if the courses you are taking this semester have been chosen primarily to prepare you for employment. You should indicate this choice only if additional training at a four-year college is not required for jobs in this occupational area.

2. Preparation for transfer

   You should indicate this choice if the course work you are taking is primarily intended to fulfill lower division requirements at a four-year college and you plan to transfer to a four-year college upon completing your lower division course work.

3. In-Service training

   You should indicate this choice if the course work you are taking this semester is primarily intended to improve your skills in an occupational/professional area in which you are already working or have worked.

4. General education

   If your reasons for enrolling this semester do not meet any of the objectives listed above, you should choose the general education alternative.

6. Whom to Follow-Up

   After the first census week of the fall term, non-continuing student lists can be developed. Details about each student's occupational major and achievement level help identify the list of students to be followed-up. The college and/or program objectives for the study will help to further refine the follow-up universe. In most studies, all graduates, certificate completers, and Class 1 and 2 achievers will probably merit follow-up contact. A sample of Class 3 and 4

achievers, partial completers and non-completers will probably be included. Again, reasons for including or not including students and sampling will de determined by the study objectives and design.

Note: Identification of program completers in the follow-up matrix (page 24) requires that students so identified not be enrolled in the college first census week fall term. Some colleges have reported that sizable numbers of students complete programs, receive degrees or certificates, but reenroll as part-time students to continue their education, for a variety of reasons. These students would not be identified in the Follow-up Matrix (limited to non-continuing students) and would thus not be followed-up as program completers. If this type of error appears to be significant, it is recommended that the college flag students <u>whenever</u> they qualify as a Graduate or Certificate completer, and include these students in the next follow-up matrix, whether or not they reenroll in the college.

7. Study Design

It is obvious that one particular detailed plan for following non-continuing students cannot suffice for all students in all programs in all colleges at all times.

However, research and experience indicate that the general procedures indicated in the accompanying flowchart (page 37) are usually appropriate and feasible. Specific procedures for each step in the flowchart will depend upon many things, including numbers of students involved, available resources, time frame limitations, types of information desired, and, in general, the purpose of the particular study. Following are recommended steps, as indicated in the flowchart:

a. Prepare Follow-Up Matrix

The follow-up matrix described in Chapter III can be prepared shortly after first census week in any term, as soon as non-continuing students can be identified. The student's major class (horizontal in the matrix) should have been identified during the previous term, and non-continuing status (vertical in the matrix) is determined by his/her accomplishment that semester. Each student can now be identified by a number (1, 2, 3, or 4) to indicate major class and by a letter (G, C, A, P, N) to indicate non-continuing status. There are thus twenty cells in the matrix into which a student could be placed, and a simple count would produce the number of students falling into each. Depending upon the college's long-range follow-up plans, it may or may not be advisable to analyze in further detail (by specific major) the distributions in the various cells.

b. Decide on Purpose(s) of Study

After observing the numbers in the various cells of the follow-up matrix, specific purposes of the study should be formulated. These purposes may have been clearly delineated in a prepared detailed follow-up plan, or they may be dictated by the numbers in the cells.

c. Select Group(s) from Matrix

Selection of groups will depend upon the purposes decided upon in step (b).

d. Assign Responsibilities

As indicated earlier, general responsibility for follow-up will depend upon situations existing at the particular college (or district). At this state in the flowchart it is essential that one particular individual (or several, if the work is to be

partitioned by program or department) be designated to direct the details of the particular study. It is also important at this stage for the study director to know what resources will be available, e.g. budget, personnel, time, and data processing facilities.

e. Prepare Students for Follow-Up

One of the first assignments of the study director should be to determine what has been done in the way of student preparation for follow-up, assess its scope, and plan to remedy as much as possible any deficiencies. It is to be hoped that after a semester or two, each college will have developed and implemented plans for follow-up preparation along the lines suggested on page 31. The study director should be aware of what has been done and realize that preparation is possible until data is actually collected from the students.

f. Determine Sample Size

After selecting the cells in the follow-up matrix to be studied, determine the number of students to be contacted--whether all or only part of them. A discussion of the use of sampling in follow-up studies is presented in Appendix A of this manual. Several factors must be weighed in arriving at a decision about sampling: (1) the overall scope of the study, (2) resources available, (3) the degree of generalization envisioned, (4) the number and variety of majors to be included. Before rejecting sampling techniques completely, it might be well to reflect on the fact that professional measurers of public opinion now can and do make statements with demonstrated precision about millions of people by obtaining data from only a few hundred.

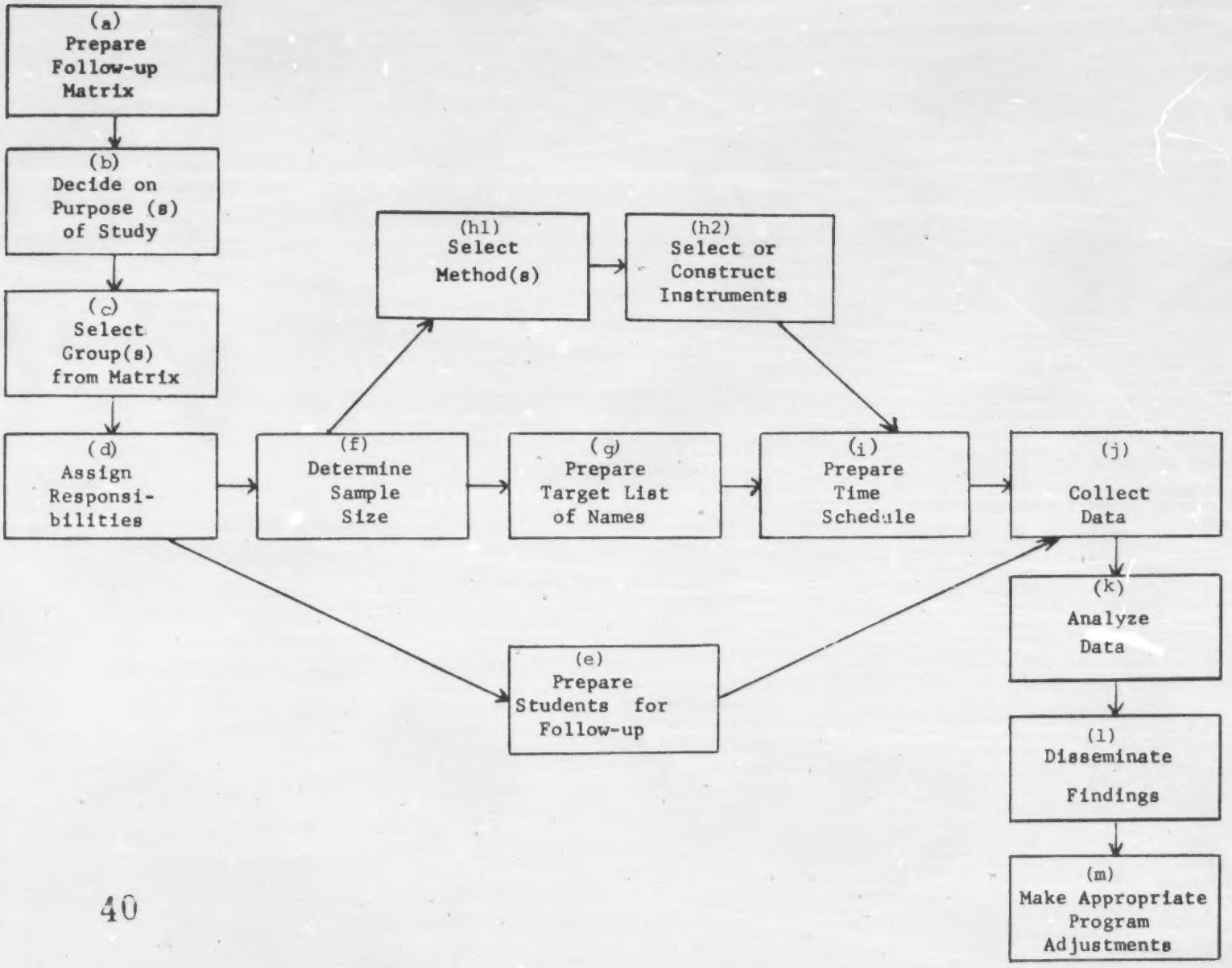
g. Prepare Target List of Names

Following the sampling decision, the study director now has two tasks to perform in the sequence leading to completion of the study; (1) select the method(s) to be used (see h below), and (2) prepare a list of names of former students to be contacted. This list can (if desired) be prepared in the form of mailing labels, which can be coded to include major, sex, special needs, and other desired characteristics. Some colleges code with the student identification number only.

h. Select Method(s), Select or Construct Instruments

It is expected that in most studies at most colleges, mailed questionnaires will be the most feasible vehicle for obtaining data from former students. Other possibilities are telephone or in-person interviews, or combinations of any of the three. Examples of student follow-up questionnaires and letters are included in Appendix B.

GENERAL FLOWCHART FOR FOLLOW-UP


(a) Prepare Follow-up Matrix
(b) Decide on Purpose (s) of Study
(c) Select Group(s) from Matrix
(d) Assign Responsi-bilities
(h1) Select Method(s)
(h2) Select or Construct Instruments
(f) Determine Sample Size
(g) Prepare Target List of Names
(i) Prepare Time Schedule
(j) Collect Data
(e) Prepare Students for Follow-up
(k) Analyze Data
(l) Disseminate Findings
(m) Make Appropriate Program Adjustments

Following are some suggestions, gleaned from the literature and from experience to date with SAM for preparing instruments and conducting a follow-up study by mail:

(1) design the instrument so it is short, simple and easy to understand.

(2) use as few words as possible, use words that are familiar, don't abbreviate.

(3) use two simple questions rather than one complex one.

(4) avoid leading questions that imply desired answers.

(5) place easiest to answer questions near the beginning.

(6) plan method of tabulating results as a part of questionnaire design.

(7) consider using double postcard for brief questionnaire.

(8) observe parallelism and exclusiveness in multiple-choice questions.

(9) make directions brief but complete and set off with distinctive type, e.g. italics.

(10) state a deadline of about ten days after mailing.

(11) ask only questions that clearly relate to the study objectives.

(12) indicate endorsement of the questionnaire by someone held in high esteem by the recipient.

(13) test the questionnaire on a few people before you finalize it.

(14) time the mailing for arrival early in the week.

(15) enclose another questionnaire in any subsequent mailings.

(16) send any second mailing about two weeks after the first.

(17) enclose accompanying letter (except in double postcard mailing) briefly explaining the project and motivating the recipient to respond (some colleges have tried incentives for respondents.)

(18) enclose a self-addressed, postage-paid envelope.

(19) give prime consideration in designing the questionnaire to motivating its return, secondary consideration to data processing requirements.

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(20) if deemed necessary, assure respondent that names will not be used in any published reports; however, most researchers agree that anonymity is not critical in response rates and it is advisable to be able to make a second contact with non-respondents, thus requiring some kind of identification.

(21) use different color questionnaires for groups you want to study separately, e.g. special needs students, non-completers. College experiences with SAM and the Longitudinal Study confirm the value of many of these suggestions. They also consistently indicate the value of the telephone interviews in follow-up studies.

On the basis of one mailout, results to date indicate that about 10-20% of those mailed will be returned as undeliverable and between 15% and 30% usable questionnaires will be returned. If a second mailout is performed, (about 2-3 weeks later) the percent of usable responses will usually reach 30-40%. Defending generalizations on the basis of less than 50% response is at best perilous. If, instead of a third mailout, telephone interviews are used, response rate can usually be brought well above 50% and generalizations are much more defensible. Appropriately trained students can be quite effective as telephone interviewers and information comparable to that obtained through written questionnaires can be elicited. Some telephone interviewing suggestions:

(a) make calls in the early evening
(b) have a carefully structured set of questions, but keep a conversational tone--vary the order of questions if it seems advisable
(c) try three times before giving up

i. Prepare Time Schedule

It is suggested that a rigid time schedule for the various steps in the study be prepared. The following time estimates can serve as a guide.

	ACTIVITY	DAY
(1)	mail questionnaire	1
(2)	mail second questionnaire (optional)	15
(3)	telephone non-respondents (optional)	25-30
(4)	collect responses, tally, and/or keypunch	3-30
(5)	analyze data	30-35
(6)	prepare and disseminate reports	36-40

Thus, the study should be completed in a maximum of six weeks. Elimination of step 2 and/or 3 can reduce the time significantly but at some risk to generalizations from the study findings.

j. Collect Data

Among the ways in which follow-up studies differ from other studies is that the data arrive over a period of time which offers the advantage of utilizing a more leisurely tallying procedure. If carefully thought out formats are prepared in advance for recording the data as it arrives, secretarial help can usually keep tallies up to date. For this reason, manual tabulation may be preferable to electronic data processing for tallying and analyzing follow-up responses. A generally satisfactory method is to use several blank questionnaires for recording tallies. Each blank questionnaire could be marked to identify desired sub-groupings. For example, if sub-groups are desired for sex (male and female), status (full-time, part-time) and age (under 21, 21-25, over 25) twelve (2x2x3) blank questionnaires should be used. For additional distinctions, different colored pencils can be used. For a larger number of breakdowns, punched cards and electronic data processing equipment are probably advisable.

k. Analyze Data

After data collection and tabulation are completed, the study director (or someone else) must take a good hard look at the data with a view toward answering these questions:

(1) What concepts that we hold about our program(s) do the data confirm or deny?

(2) What do the data tell us about our program(s) that we didn't already know?

(3) What should be done as a result of the answers to questions (1) and (2)?

There are several possible approaches to analyzing the data. Again, the specific purposes of the study, its scope, limitations on time and resources are factors which must be considered. A simple tally may suffice one time, while a sophisticated statistical analysis may be appropriate another time. A thorough analysis in one office may be best at one time, while sending relevant completed questionnaires* to specific program heads for their anlaysis may be more appropriate at another.

*It is almost always appropriate to send copies of written comments to program heads.

It is suggested that highly sophisticated statistical analyses are seldom appropriate, and it is not essential that the study director be able to perform such analysis, However, competent statisticians can nearly always be found on a college staff and their consultation is advised before drawing inferences from "close" data that might have major impact upon a program.

l. Disseminate Findings

Use of data for program planning and evaluation is the ultimate objective of follow-up. Persons in the position to make or influence program modifications must know the results of the study. Data must be displayed in understandable and usable form. For some, formal reports are preferred; for others, brief memoranda; for still others a simple presentation of the data in tabular or graphical form will best present the message. Often, discussion of the interpretation of results will help stimulate action.

m. Make Appropriate Adjustments

This final step in the follow-up flowchart is the culmination of the efforts--this is what it's all about. In one sense, this step is not part of the study, it's what should be done as a result of the study. In another sense, it is the study.

B. Employer Follow-Up

Periodically a college may wish to utilize employer feedback as a part of the follow-up study for a specific occupational program. Information gained through follow-up with employers of former occupational education students can be used along with input from other contacts with employers, students, and college faculty and staff to review and evaluate the occupational preparation provided by the college. The following guidelines for conducting employer follow-up are based on field test experiences at community colleges.

1. Determine the Objectives and Select Programs for Employer Follow-Up

As a part of the decision to include employers in the SAM Follow-up study, determine objectives. There may be a single objective to:

gain employer feedback on the effectiveness of occupational preparation and utilize that information in program review and modification.

Your college may identify additional objectives for conducting employer follow-up, such as to:

improve interaction between college and industry personnel.

develop an accurate description of target jobs.

develop job markets for future program completers.

Since employer follow-up is probably not practical annually for all programs, priorities and criteria for selecting specific programs need to be established. Consideration might be given to:

programs with low placement levels.

programs experiencing marginal enrollments or completions.

new programs experiencing first placements.

occupations experiencing rapid technological change.

programs identified in need of review by faculty and advisory committee.

Decide also the levels of occupational preparation or classes of students you want to follow-up with employers - graduates or certificates or all "completers", day and/or evening, pre-service only or continuing education or in-service.

2. Develop the Follow-Up Procedures

Since the outcome of follow-up may be program modification and change, early involvement of college representatives who may be affected is important. The planning team will probably include program instructors and administrators. Depending on the objectives, you may wish to have such services as counseling, placement, and work experience represented.

Design of the employer follow-up procedures will include:

Budget - from as little as $1.28 - $2.00 per employer contact to considerably more depending on the approach.

Time Line or Schedule - probably no less than three months.

Personnel requirements for coordinating, implementing and analyzing the results of the follow-up study.

Integration of employer and student follow-up.

Students will probably be the key to identifying employers.

Student questionnaires need to be designed to accommodate employer follow-up. Find out the former student's job title (since you may wish to contact only employers of those students working in a job related to the occupational training program), the employer name and address, and the name and title of the immediate supervisor, since that person will probably have the best understanding of the occupational preparation of your former student.

If student questionnaires are not the source for identifying employers, alternate methods such as instructor or placement files will need to be used.

A student release to contact the employer will probably not be necessary since the information sought will be program rather than personal performance oriented. This is a crucial decision and needs to be clearly understood by college personnel, the former student, and the employer.

Timing for employer follow-up may be influenced by your SAM student follow-up schedule. Six months to one year on the job should provide enough time for a former student to demonstrate entry level skills brought to the job. In most cases, this will be too early to assess more advanced skills provided by the occupational education program. For some occupations you may want to plan for a two stage assessment--one at six months to one year and the second after two years on the job.

Job mobility and the seasonal nature of some occupations are problems you should anticipate. Both will affect the size of the employer "universe" and your timing decisions.

Sampling generally will not be a factor in employer follow-up since the size of the "universe" will be small enough so you will wish to contact all employers. For some low enrollment programs, it may be advisable to follow-up two consecutive years to have a large enough number of employers to gain significant input.

Employer "readiness" for follow-up is just as crucial as student preparation. Utilize trade and industry associations, advisory committees, and college contacts to prepare employers for follow-up.

3. Determine the Contact Method

The objectives, programs selected, procedures, and resources will influence the contact method with employers.

The size of the organization, proximity to the college, and type of occupation also will affect your decision about how to contact the employer.

A variety of contact methods may need to be used. Types of contacts that might be considered include:

a. mailed questionnaire.

b. mailed questionnaire with telephone follow-up

   (1) with 100% of the employers responding.
   (2) with a sample of employers responding.

c. mailed questionnaire with personal interview follow-up

   (1) with 100% of the employers responding.
   (2) with a sample of employers responding.

d. letter of explanation with questionnaire followed by telephone interview.

e. personal interview only.

If some form of interview is used, the personnel assigned, whether instructional staff, classified employees, students, or consultants should be trained in interviewing techniques to draw in-depth information from the employer. Interviewing skill may be more crucial than program familiarity.

Reaching the right person, i.e., the former student's immediate supervisor, may be a challenge. In a larger organization, the personnel department may be a vehicle for contacting the supervisor.

100% response is the goal for employer follow-up. To achieve that goal, it will probably be necessary to follow through with non-respondents by mail, by telephone or in person after the first contact. Determine in advance the minimum response level that will provide significant input.

4. Design the Questionnaire

The method and ease of tabulating responses should be considered.

Rated items and open-ended questions used in combination on the questionnaire may draw more complete information.

The questionnaire should anticipate the lack of familiarity that many employers may have with the college program. Questions should be job skills oriented rather than instructional content oriented. It may be beneficial to attach a description of the program and courses required in the mailing to employers.

A letter, if used, to explain the employer follow-up study, should be signed by a college staff member who may be known by the employer. Often, this may be an instructor.

Advisory committee members may provide valuable input to questionnaire and letter content and terminology. (See Appendix B for sample Employer Letter and Questionnaire.)

5. Compile, Analyze, and Disseminate Findings

It may be practical to tabulate employer responses manually rather than by computer. This is especially pertinent if the universe is small and if open-ended questions are used along with rated items.

Since the primary objective of the employer follow-up studies is to assist with program modification and review, data should be organized into understandable, usable form.

Data analysis might include comparison of employer and student perceptions about various aspects of employment.

Findings should be distributed to instructional staff, advisory committee members, and appropriate administrative and support services personnel. The input from these knowledgeable persons should be sought and used.

Employer follow-up data may serve as an indicator that additional follow-up activities such as an in-depth study are needed.

6. Plan Future Action

The follow-up study results should be translated into specific changes or considerations that will be made.

Priorities for action and a schedule should be established.

Indicators may point to the need for a more comprehensive in-depth study of a specific occupation.

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SAM Student and Employer Follow-up studies can be a source of data that is valuable for use in program planning and evaluation. However, effective follow-up studies producing meaningful data take careful planning and coordination. There is no simple approach to follow-up that provides a magic formula for success. The suggestions included in this Chapter will, it is hoped, stimulate innovative efforts that can result in follow-up improvements. The interpretation and use of the data for program improvement is, of course, the ultimate goal. SAM data, however, is only one source of information that should be considered in assessment of occupational programs. Other sources of information such as COPES, financial data, labor market needs, should be looked at together in comprehensive evaluation.

V • USING SAM FOR VEDS

A. General Considerations

The Education Amendments of 1976 Act (PL 94-482), Title II, Vocational Education, authorized the National Center for Education Statistics (NCES) in conjunction with the Commissioner of Education to develop (Sec. 161) a national "vocational education data reporting and accounting system" (later dubbed VEDS). The Act requires that the system provide "information on vocational (A) students (including information on their race and sex), (B) programs, (C) program completers and leavers, (D) staff, (E) facilities, and (F) expenditures" in addition to including information resulting from "evaluations required to be conducted by Section 112". Section 112 states that "each State shall evaluate...each such program within the State which purports to impart entry level job skills according to the extent to which program completers and leavers (i) find employment in occupations related to their training, and (ii) are considered by their employers to be well trained and prepared for employment..."

NCES developed and proposed a VEDS system that was greeted with a storm of protest from the postsecondary community (and others). The postsecondary objections centered around two basic problems--(1) the data burden imposed, and (2) the accuracy of the representation of postsecondary efforts in vocational education. As a result of these protests, NCES agreed to work with representatives of the postsecondary community and make some changes. The present requirements grew out of these deliberations and are now required for at least two years. Serious questions remain with regard to both of the problems indicated above, but for at least two years the VEDS forms discussed in this chapter must be used.

The following sections describe how SAM procedures should be used to produce information for the VEDS requirements. Guidelines presented here are not intended to answer all questions about the VEDS forms, but are limited to discussions of how the SAM procedures can provide specific data items for the VEDS forms.

B. SAM Capabilities Essential to VEDS Reporting

In order to use SAM procedures to maximum advantage in providing VEDS information, the following capabilities should be available to the college:

(1) Identification of Occupational Courses

All occupational courses should be identified, coded with appropriate priority letters (A, B, C, D) and with appropriate USOE (or TOP) program code. Each A, B, C priority course should be labelled with a six digit USOE code, each D priority course with a two digit USOE code.

(2) Determination of Student Program Enrollment

Provision should be made for scanning students' course enrollments to identify occupational students, assign them to SAM Class 1 (A and B priority), Class 2 (C priority), or Class 3 (D priority--as described in Ch. II), and to a specific USOE program code (6 digits for Classes 1 and 2, 2 digits for Class 3).

(3) Determination of Full Year Unduplicated Counts

VEDS requires unduplicated counts of students enrolled in vocational programs during an academic year. Thus, it is necessary that the college be able to merge enrollment lists for all terms (semester, quarter, summer session) during the year and provide unduplicated counts. Summer sessions should be included in the academic year following the session. Please refer to page 18 for guidelines for identifying majors for students whose major changes during the year.

(4) SAM Follow-Up Matrix

Provision should be made for identifying non-continuing students and placing them in appropriate cells in the SAM Follow-Up Matrix.

(5) The Student Master File*

A key element in using SAM procedures to provide VEDS information is the existence of the Student Master File containing the following items:

(a) Occupational program enrollment, described in (2) above.

(b) Enrollment in Consumer and Homemaking programs (USOE 09.01XX).

(c) Sex: male or female.

(d) Racial/Ethnic: one (only) of the following six classifications:

1. American Indian/Alaskan Native
2. Asian or Pacific Islander
3. Black, not Hispanic
4. Hispanic
5. White, not Hispanic
6. Non-Resident Alien (Note that for VEDS purposes, Non-Resident Alien is considered a racial/ethnic classification.)

*Phrases in quotes are from VEDS instructions.

(e) Special Needs: yes or no indicators for each of the following:

1. Handicapped - "Someone who has a physical or mental impairment" (eleven types are defined in VEDS instructions).
2. Limited English Proficiency - "Any member of a national origin minority who does not speak and understand the English language in an instructional setting well enough to benefit from vocational studies to the same extent as a student whose primary language is English...Operationally, enrollment in English as a second language could be used as a proxy here."
3. Disadvantaged
   (i) Economically disadvantaged - "Operationally, can be determined by reporting students who are participating in BEOG's or similar financial aid or work-study program."
   (ii) Academically disadvantaged - "Operationally, can be determined by reporting students enrolled in remedial instruction or on academic probation."

Documentation for students identified as having special needs should be available at the college.

(f) Awards granted: indicators and dates for:

1. AA or AS degree
2. Program certificate requiring two years or more
3. Program certificate requiring at least one year but less than two years
4. Program certificate requiring less than one year

(g) Student Goal - an indicator of the student's educational goal (as stated by the student).

Since VEDS is concerned only with programs which "purport to impart entry level job skills", reporting to VEDS will be "increased in accuracy and decreased in data burden if the student's intent is considered. Colleges may obtain this information in varying formats*, but the key question is: "Is the student planning to enter the job market after he leaves college?"

Colleges using the data element S11, Student Goal, in the California Community Colleges Statewide Reporting System obtain the following coded data for Student Goal:

1. Transfer without AA/AS degree
2. AA/AS transfer
3. AA/AS Vocational
4. AA/AS General Education
5. Certificate
6. Job Skills - to maintain present job
7. Job Skills - to prepare for new job
8. Personal Interest (not for employment)
9. Not known (not reported)

For the coding procedure, answers 3, 5, or 7 can be assumed to indicate students planning to enter a job market. As described later, these students will qualify for Part A of the Enrollment and Completion Report (2404A).

*One suggested format is given on page 33

C. The VEDS Reporting Forms

VEDS requires each State to complete and submit annually the following reports:

#2404A Program Enrollment and Completion Report

#2404A-1 Postsecondary Teacher - Staff Report

#2404-2 Financial Status Report

#2404A-7 Postsecondary Completer/Leaver Follow-Up Report

#2404-8 Employer Follow-Up Report

Dates on which these reports are due in the Chancellor's Office are indicated on page 73.

The Teacher-Staff Report is a relatively simple one page form requesting staff head counts by 2 digit USOE code and is not discussed in this manual. Neither is the Financial Status Report which is prepared by the Chancellor's Office, California Community Colleges, on the basis of other information already submitted to that office.

Following is a discussion of how SAM procedures should be used to complete the other three forms at the local college level. The Manual should be used in conjunction with copies of the actual forms and instructions furnished by the Chancellor's Office. Format sketches for the three forms are appended on pages 63-64.

D. VEDS Form 2404A, Postsecondary Program Enrollment and Completion Report

VEDS form 2404A, Postsecondary Program Enrollment and Completion Report, is a 13 page 5 part instrument detailing information on occupational enrollments in the college for an academic year. Part A (Enrollments requiring follow-up) uses 12 of the 13 pages. Part B (Enrollments not requiring follow-up) uses less than one page and shares that page with the remaining three brief parts of the form. Note that the columnar headings for Part A and Part B are identical, except that Part A includes some additional columns requesting information about completers.

(1) Total Enrollment (Sec. 1, Part A and Part B)

All occupational enrollments during an academic year will be reported either in the first column of Part A or in the first column of Part B.

The flow chart on page 52 delineates how to use SAM procedures to determine Part A and Part B enrollments.

Note the following:

(a) Part A enrollees (those requiring follow-up activities):

-are enrolled in B or C level courses and have indicated an intention to enter the job market.

-are listed by 6 digit USOE code.

(b) Part B (lst 8 rows) enrollees (those not requiring follow-up activities):

-include apprentices (which must also be reported separately in part D).

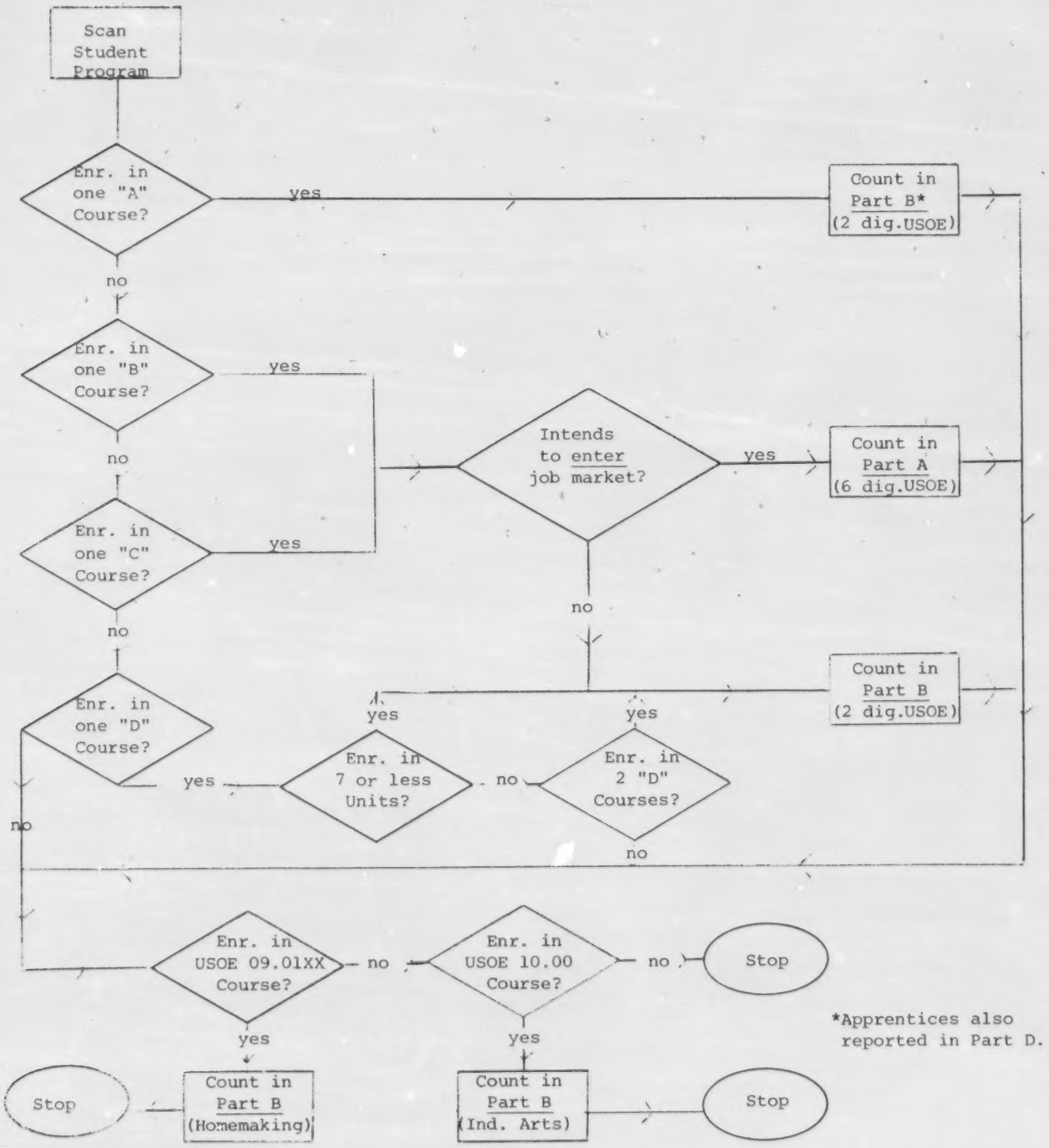
-include enrollees in B & C level courses who have not indicated an intention to enter the job market.

-include enrollees in D level courses (see flow chart for specific requirements).

-are listed by 2 digit USOE code.

All total enrollments reported in Section I of both Part A and Part B are to include students enrolled any time during the academic year being reported (summer session is included with the subsequent Fall and Spring). A student should not be counted more than once in Part A and the first 8 rows of Part B.

Flow Chart for Using SAM to Determine VEDS Part A and Part B Enrollments



*Apprentices also reported in Part D.

The remaining rows of Part B consist of (1) Preparation for Occupation of Homemaking, USOE code 09.01XX, and (2) Industrial Arts, USOE code 10.00.

A student enrolled in a class labelled with a USOE 09.01XX code should be counted in this section whether or not he or she is counted in Part A or the first 8 rows of Part B. No student should be counted more than once in the Preparation for Occupation of Homemaking section, however. Except in rare instances, California community colleges will show no enrollment in Industrial Arts.

(2) Race/Ethnic/Sex (Sec. II, Part A and Part B)

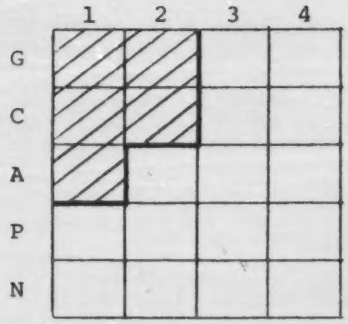
For both Part A & B, total enrollments in Sec. I must be broken out into the twelve columns of Sec. II, Race/Ethnic/Sex. Note that "Non-Resident Alien" (which should include those students who can be identified as being in the country on a non-permanent basis) is considered a racial/ethnic category and students in this category are not included in the remaining ethnic breakout. Note also that there is no accommodation for "Unknown". The college should prorate the unknowns so that that total of the twelve columns of Sec. II (including Sec. II (a)) equals the figure in Sec. I (for all rows). Methods for any prorating should be described briefly at the bottom of the page.

(3) Special Needs (Sec. III, Part A and Part B)

Sec. III for both Part A and Part B contains three columns for reporting students with one or more of the following special needs: Handicapped, Limited English Proficiency, Disadvantaged. A student is counted in as many of the three columns as are applicable. Operational definitions (as provided by VEDS) useful for identifying Special Needs students are indicated earlier in this chapter (Sec. B, SAM Capabilities Essential to VEDS Reporting). Thus, a student could be reported as both Handicapped and Disadvantaged, or Handicapped only, or any other combination of the three Special Needs, or not included at all in this Section.

(4) Section IV (Part A only)

Section IV of Part A requires counts of "Program Completers". These should be identified by appropriate cells in the SAM Follow-Up Matrix. For VEDS purposes, program completers will be those Class 1 (column 1) students who obtained an Associate Degree or a Certificate or who were achievers (first three rows), and those class 2 (column 2) students who obtained an Associate Degree or Certificate (first 2 rows only).



Shaded area indicates VEDS "Completers"

Some notes:

(a) Completer count will normally be made immediately after the first census week of the Fall term following the close of the academic year being reported.

(b) Program completers require the same breakouts for Racial/Ethnic Designation and Sex and for Special Needs as for Part A (and Part B) enrollments.

(c) An additional breakout for Program Completers is required, that of recognition or award granted. Five columns are presented to obtain this information:

1. Associate Degree
2. Certificate requiring 2 years or more
3. Certificate requiring one but less than two years
4. Certificate requiring less than one year
5. No formal award

In California community colleges, columns (2) and (4) will usually show zeros.

(d) Although counts for Program "Leavers" are not required for the Enrollment & Completion Report, colleges may wish to identify them at the same time as Program "Completers" are identified. See next section for details on "Leavers".

(5) Parts C, D, E

Parts C, D, and E are brief tables for which data can probably best be provided by appropriate campus offices (such as Handicapped Coordinator, Cooperative Education Coordinator, etc.) and will not be discussed further in this Manual.

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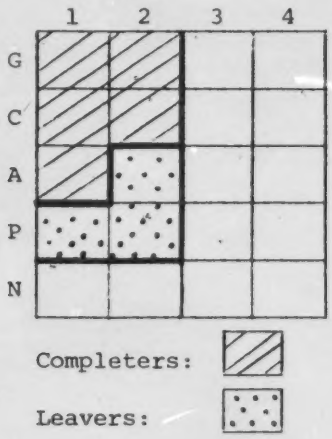
E. VEDS Form 2404A-7, Postsecondary Completer/Leaver Follow-Up Report

(1) The Follow-Up Universe and Sample

VEDS Form 2404A-7 Postsecondary Completer/Leaver Follow-Up Report is a 5 part, 19 page instrument requesting information about employment of occupational students after they leave college. It requires that follow-up questionnaires be sent to students who are "completers" or "leavers" of six digit occupational programs reported in Part A of the Program Enrollment and Completion Report discussed in the preceding section. "Completers" and "leavers" are determined from the SAM Follow-Up Matrix as follows:



Note that only enrollees originally counted in Part A of the Program Enrollment and Completion Report will be followed up, and not all of them. Apprentices will not be followed up for VEDS reporting. Neither will any other Part B enrollees. Neither will any student identified in the matrix as a non-completer. Thus, the Follow-Up Universe consists of all the Part A completers and leavers identified by the matrix. The actual number of students to be followed up will be further reduced to about 25% of the total universe, as explained below.

All of the information to be reported on the Completer/Leaver Follow-Up Report is provided by responses to the follow-up questionnaire sent to students. The Follow-Up Sample, i.e. the students to whom questionnaires are to be sent, is determined as follows:

Each California community college has been assigned to one of four representative sample groups (page 67), and asked to make a COPES self-study and SAM Follow-Up only on specified clusters of programs (page 66). VEDS questionnaires should be sent to students identified in the Follow-Up Universe who were enrolled in one of the six-digit programs in the specified cluster assigned to the college for the reporting year. For example, colleges in group IV sent follow-up questionnaires to students enrolled in Agriculture or Technical programs (i.e., first 2 digits 01. or 16.) only, for the 1980-81 reporting year.*

The questions to be used are specified by VEDS (Form 2404-5) and appear on page 69. Colleges are expected to use these questions as stated and mail to students in the Follow-Up Sample.

Some notes:

-Follow-up forms should be mailed in the Spring in time to meet announced deadlines.

-Since California community colleges are permitted to follow up only one fourth of the Follow-Up Universe each year, a higher response rate than that to be anticipated were the whole Universe used is expected by VEDS. This means that a second contact with non-respondents 2-3 weeks after the first mailing is recommended.

-In order to report follow-up findings in the categories to be described below, it is essential that returned questionnaires be student identifiable or be coded for each of the required subgroupings. The former is preferable, as the responses can then be tied to the Student Master File and subgroup totals produced automatically.

(2) Employment Status Information (Parts A, B, C, E)

All parts of the Completer/Leaver Follow-Up Report (with the exception of Part D) request information about the employment status of the student and all have the same columnar headings, as follows:

Column	Item
1	-Universe and Sample Totals
2	-Military Service Full-Time
3	-Employed in Field Related to Training
4	-Employed in Field not Related to Training, not pursuing Higher Education
5	-Pursuing Additional Education (employed in field not related to training, not in labor force, or unemployed)
6	-Unemployed (Seeking Employment) and not Pursuing Additional Education
7	-Not in Labor Force and not Pursuing Additional Education
8	-Status Unknown

*For students enrolled in 1979-80.

Part A (with separate sections for completers and leavers) of the form requires numbers for each of these columns for each of the 118 + six digit program codes. Note that in column 1, Universe Totals should be included for every six digit program offered by the college, while Sample Totals should equal Universe Totals for all programs in the cluster assigned to the college for the reporting year. For programs not in these clusters, Sample Totals should be filled in with zeros and the remaining columns left blank.

Following is a step-by-step set of instructions for obtaining the numbers for the columns followed by a flow-chart summarizing the requirements. These instructions apply to Part A, Employment Status by Instructional Program (A (1) for Completers, A (2) for Leavers.)

Column 1 - Universe and Sample Totals

Universe totals are obtained from the SAM Follow-Up Matrix. For completers, required in Parts A (1), B (1), C (1), E (1) use cells G1, G2, C1, C2, A1; for leavers, required in Parts A (2), B (2), C (2), use cells A2, P1, P2.

Sample totals are identical to universe totals for the programs to be followed up according to the Four Year Reporting schedule, otherwise zero. Approximately one fourth of each college's programs will require follow-up in a particular year.

Columns 2 through 7 require information obtained from the Completer/Leaver Follow-Up Form sent to all students indicated in the Sample Column. To obtain the totals for these columns, it is necessary to look at the responses to questions 2, 4, and 1 (in that order.) Columns 2 through 7 should be left blank on the rows where the Sample Columns are zero.

Column 2 - Military Service Full-Time

Column 2 will reflect all those who responded to question 2 by checking Employed (full-time military service). No other question need be checked for this column.

Column 3 - Employed in a Field Related to Training

To be included in this column, question 2 must have the First response choice (Employed, non-military) checked and must also have question 4 answered yes (related field).

Column 4 - Employed in a Field Not Related to Training, Not Pursuing Additional Education

To be counted in column 4, a returned follow-up form must have all three questions answered, as follows:

Question 2: Employed (non-military)
Question 4: No (not related field)
Question 1: Not currently attending school

Column 5 - Pursuing Additional Education (Employed in a Field Not Related to Training, Not in Labor Force, or Unemployed)

Three different combinations of responses to the three questions place a student in column 5, as follows:

(1) Question 2: Employed (non-military) and
Question 4: No (not related field) and
Question 1: Currently attending school

or

(2) Question 2: Unemployed (seeking) and
Question 1: Currently attending school

or

(3) Question 2: Not in the labor force, and
Question 1: Currently attending school

Column 6 - Unemployed (Seeking Employment and Not Pursuing Additional Education

To be counted in column 6, a returned form must have question 2 answered Unemployed (seeking) and question 1 answered Not Currently Attending School.

Column 7 - Not in Labor Force and Not Pursuing Additional Education

To be counted in column 7, a returned form must have question 2 answered Not in the Labor Force and question 1 answered Not Currently Attending School.

Column 8 -

Column 8 is determined by subtracting the total of columns 2 through 7 from the sample column.

Summary

Column	How Determined
1	Universe: from appropriate cells in follow-up matrix Sample: same as universe for programs requiring follow-up, otherwise zero
2	Q2, Ans. 2
3	Q2, Ans. 1 and Q4, Ans. 1
4	Q2, Ans. 1 and Q4, Ans. 2 and Q1, Ans. 2
5	Q2, Ans. 1 and Q4, Ans. 2 and Q1, Ans. 1 or Q2, Ans. 3 and Q1, Ans. 1 or Q2, Ans. 4 and Q1, Ans. 1
6	Q2, Ans. 3 and Q1, Ans. 2
7	Q2, Ans. 4 and Q1, Ans. 2
8	Subtract total of columns 2 through 7 from column 1

Parts B, C, and E of the form require the same Employment Status information as that in Part A, rearranged according to various student characteristics--the same characteristics for which enrollment breakouts were required for the Enrollment and Completion Report. It is thus important that questionnaire responses be student identified, so that responses can be tied to the Student Master File and breakouts produced automatically.

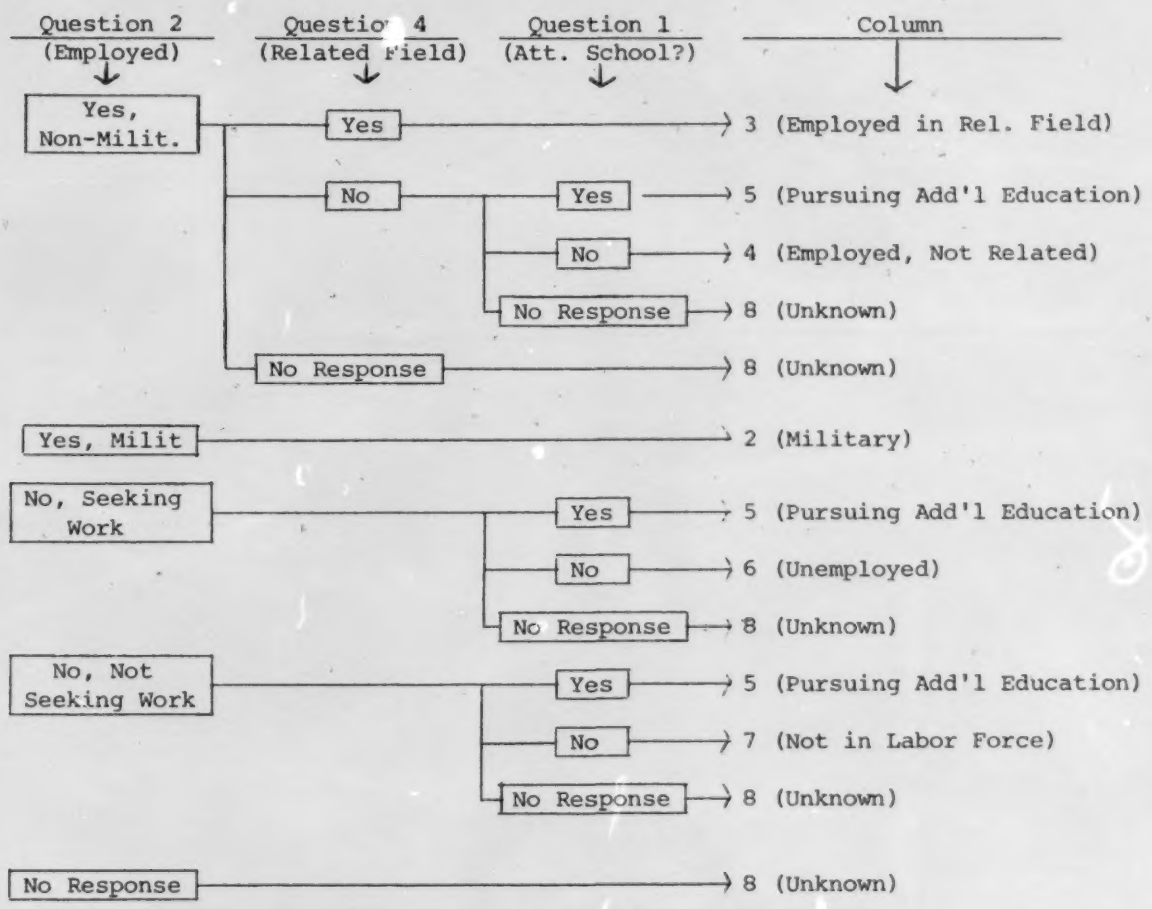
Please note that on Part B, Employment Status by Racial/Ethnic/Sex Designation, the Sample column numbers will generally be non-zero but less than the Universe column numbers. The totals for the Universe and Sample columns should, however, be identical to those respective column totals reported in Part A.

For Part C, Employment Status of Special Needs Completers (or Leavers), Universe and Sample totals will be less than those for Part A, since not all students have special needs.

For Part E, Employment Status by Degree or Award Confered, Universe and Sample totals should equal those in Part A for Completers. Since Leavers do not earn awards, there is no Part E (2).

INSTRUCTIONS FOR DETERMINING COLUMN PLACEMENT ON
FOLLOW-UP REPORT (#2404A-7, Parts A, B, C, E) FROM
STUDENT FOLLOW-UP FORM (#2404-5)

Check responses to questions 2, 4, 1, in that order, as necessary as diagrammed below:



Non-respondents should be included in column 8.
Column 1 (total sample) must be equal sum of columns 2 through 8.

Note that there are: 1 path to column 2
1 path to column 3
1 path to column 4
3 paths to column 5
1 path to column 6
1 path to column 7
5 paths to column 8

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(3) Part D, Field of Employment and Average Hourly Salary

Part D of the Completer/Leaver Follow-Up Report requests two kinds of information: (1) relationship between field of college training and field of employment, and (2) salary information. Section I of Part D asks for the former, while Sections II and III ask for the latter.

Information requested in Part D requires individual judgments and therefore cannot be processed automatically by computer.

Following are recommended procedures for completing Part D:

(a) Sort through all returned questionnaires and retain only those for Completers reported in Columns 3 and 4 of Part A, i.e., Completers who report that they are employed, whether or not in a related field.

(b) For each questionnaire retained, determine the appropriate SOC (Standard Occupational Classification) code for the reported job title (see VEDS form instructions), and count the student in the column headed by this code and in the row indicating the college program enrollment.

(c) Enter total counts of students in each cell of Section I. Note that Section I of Part D has nothing to do with salary information.

(d) Resort the questionnaires used to provide the SOC information (Sec. 1), and retain only those who indicate that they are employed in a related field (col. 3); who also indicate that they work at least 35 hours per week (question 6 on the questionnaire) and who provide salary information (question 5).

(e) Sort this new (smaller) group of questionnaires by sex. Count the total number of males and females for each six digit program code and enter these counts in Section III (Base) of the report form for Part D.

(f) To obtain the Average Hourly Salary figures for Section II, refigure (if necessary) each response to question 5 on the questionnaire so that salary per hour is indicated. Then compute a simple arithmetic average of all the hourly salaries (for each program and sex) and enter these average amounts (in dollars and cents) in Section II of Part D.

F. VEDS Form 2404-8, Employer Follow-Up Report

VEDS Form 2404-8, the Employer Follow-Up Report is a four page, 4 part form requesting employer feedback, information not requested for federal reporting in previous years. Information for this report is obtained from employer response to a questionnaire. The questionnaire to be used is specified by VEDS Form 2404-6, Employer Follow-Up Form (page 71), which should be duplicated by the college and sent to employers.

Following are recommended procedures for completing the Employer Follow-Up Report:

(1) Sort the completed Student Follow-Up questionnaires (including both Completers and Leavers) retaining those that indicate:

(a) the student was employed in a field related to training (placed in column 3 in Part A of the Completer/Leaver Report)

and,

(b) immediate supervisor name and address

(2) Send the Employer Follow-Up Form to all employers identified in (1) above. Be sure that the student is identified on the form. We suggest including a cover letter explaining the purpose of the request. If preferred, information can be obtained by telephone.

(3) In completing the Number of Respondents (Universe/Sample) columns on the form (all parts), numbers in the Universe column should indicate number of employers contacted while the Sample column should indicate number of employers furnishing information.

(4) All other columns of the form (all parts) require "mean ratings". These are arithmetic averages of all the ratings for the particular cell requirement.

(5) Note that all parts of the form have the same columnar headings. Mean ratings are required for (Part A) each six digit program, (Part B) Racial/Ethnic/Sex designation, (Part C) Special Needs, and (Part D) Completion status. Returned Employer Follow-Up Forms will have to be sorted for each of the four parts, and mean ratings calculated for each of the requested sub-categories.

G. Appendix to Chapter V

Format for VEDS Form #2404A Postsecondary Program Enrollment & Completion Report (13 pages total)

Part A Enrollment with Follow-Up (pages 1-12)

Vertical:	(118 + rows)	6 digit USOE Program Code
Horizontal:	(37 columns)	Sec. I Total
		Sec. II Race/Ethnic/Sex
		Sec. III Special Needs
		Sec. IV (1) Completers-Total
		(2) Completers-Race/ Ethnic/Sex
		(3) Completers-Special Needs
		(4) Completers-Recognition

Part B Enrollment with No Follow-Up (page 13)

Vertical:	(19 rows)	(1) 2 digit USOE code
		(2) Homemaking
		(3) Industrial Arts
Horizontal:	(16 columns)	Sec. I Total
		Sec. II Race/Ethnic/Sex
		Sec. III Special Needs

Part C Special Needs by Instructional Setting (page 13)

Vertical:	(4 rows)	Type of Setting
Horizontal:	(4 columns)	Type of Special Need

Part D Enrollments in Coop & Apprentice Programs (page 13)

Vertical:	(8 rows)	2 digit USOE code
Horizontal:	(2 columns)	Total Coop & Apprentice

Part E Participants by Legislative Purpose (page 13)

Vertical:	(5 rows)	Legislative Purpose
Horizontal:	(1 column)	Total only

Format for VEDS Form #2404A-7 Completer/Leaver Follow-Up Report
(19 pages total)

Part A (1) (4 pages) Employment Status (Completers Only)

Vertical: 6 digit USOE code
Horizontal: Employment Status (from follow-up)

Part A (2) (4 pages) Same as Part A (1) for Leavers Only

Part B (1) (½ page) Employment Status by Racial/Ethnic/Sex (Completers Only)

Vertical: Racial/Ethnic/Sex
Horizontal: Employment Status

Part B (2) (½ page) Same as Part B (1) for Leavers Only

Part C (1) (½ page) Employment Status by Special Need (Completers Only)

Vertical: Special Need
Horizontal: Employment Status

Part C (2) (½ page) Same as Part C (1) for Leavers Only

Part D (8 pages) Field of Employment & Average Hourly Salary (Completers Only)

Vertical: 6 digit USOE program
Horizontal: Sec. I SOC Code
Sec. II Average Hourly Salary
Sec. III Base (for Sec. II)

Part E (1) (1 page) Employment Status by Degree or Award (Completers Only)

Vertical: Degree or Award
Horizontal: Employment Status

(No Part E (2))

Format for VEDS Form #2404-8 Employer Follow-Up Report
(4 pages total)

Part A (3 pages) Mean Ratings by Instructional Program

Vertical: 6 digit USOE code
Horizontal: Mean Ratings

Part B (1/3 page) Mean Ratings by Racial/Ethnic/Sex

Vertical: Racial/Ethnic/Sex
Horizontal: Mean Ratings

Part C (1/3 page) Mean Ratings by Special Need

Vertical: Special Need
Horizontal: Mean Ratings

Part D (1/3 page) Mean Ratings by Completion Status

Vertical: Completer/Leaver Status
Horizontal: Mean Ratings

CALIFORNIA COMMUNITY COLLEGE OCCUPATIONAL PROGRAM
EVALUATION AND REPORTING SYSTEM
FOUR YEAR SCHEDULE OF ACTIVITIES FOR LOCAL COLLEGES

College Groups	78-79	79-80	80-81	81-82
I	SAM/A SAM/F 1 COPES 1	SAM/A SAM/F 4 COPES 4	SAM/A SAM/F 2 COPES 2 PAR	SAM/A SAM/F 3 COPES 3
II	SAM/A SAM/F 3 COPES 3	SAM/A SAM/F 2 COPES 2	SAM/A SAM/F 4 COPES 4 PAR	SAM/A SAM/F 1 COPES 1
III	SAM/A SAM/F 4 COPES 4	SAM/A SAM/F 1 COPES 1	SAM/A SAM/F 3 COPES 3 PAR	SAM/A SAM/F 2 COPES 2
IV	SAM/A SAM/F 2 COPES 2	SAM/A SAM/F 3 COPES 3	SAM/A SAM/F 1 COPES 1 PAR	SAM/A SAM/F 4 COPES 4

I, II, III, IV - 106 colleges divided into groups of 26 constituting a representative sample (two groups have 27 colleges)

SAM/A - SAM Accounting for completion of VEDS Form 2404A.

SAM/F - SAM Follow-Up on specified clusters of programs

1, 2, 3, 4 - Specified clusters of programs, e.g.
1. Agriculture (01), Technical (16)
2. Trade & Industrial (17)
3. Office (14), Distributive (04)
4. Health (07), Home Economics (0901)(0902)

COPES 1, 2, 3, 4 - Specified clusters as above
- Self-study of 6 digit occupational programs, all colleges
- Validation visit to representative sample to colleges

PAR - Program Administrative Review, monitoring of educational programs for all colleges & validation visits to colleges

REPRESENTATIVE SAMPLE GROUPS OF COLLEGES

Group I	Group II	Group III	Group IV
Alameda, College of	Allan Hancock College	American River College	Antelope Valley College
Bakersfield College	Barstow College	Butte College	Cabrillo College
Canada College	Canyons, College of the	Cerritos College	Cerro Coso Community College
Chabot College	Chaffey College	Citrus College	Coastline Community College
Columbia Junior College	Compton Community College	Contra Costa College	Consumnes River College
Crafton Hills College	Cuesta College	Cypress College	De Anza College
Cuymaca College	Diablo Valley College	East Los Angeles College	El Camino College
Desert, College of the	Feather River College	Foothill College	Fresno City College
Evergreen Valley College	Gavilan College	Glendale College	Golden West College
Fullerton College	Hartnell College	Imperial Valley College	Indian Valley Colleges
Grossmont College	Laney College	Lassen College	Long Beach City College
Lake Tahoe Community College	Los Angeles Harbor College	Los Angeles Mission College	Los Angeles Pierce College
Los Angeles City College	Los Angeles Trade - Tech. College	Los Angeles Valley College	Los Medanos College
Los Angeles Southwest College	Mendocino College	Merced College	Merritt College
Marin, College of	Mission College	Modesto Junior College	Monterey Peninsula College
Mira Costa College	Mt. San Antonio College	Mt. San Jacinto College	Napa College
Moorpark College	Orange Coast College	Oxnard College	Palo Verde College
Ohlone College	Pasadena City College	Rio Hondo College	Porterville College
Palomar College	Reedley College	San Bernardino Valley College	Riverside City College
Redwoods, College of the	Saddleback College	San Diego Miramar College	San Diego City College
Sacramento City College	San Diego Mesa College	San Mateo, College of	San Francisco, City College of
San Diego Evening College	San Jose City College	Santa Rosa Junior College	Santa Ana College
San Joaquin Delta College	Santa Monica College	Siskiyous, College of the	Sequoias, College of the
Santa Barbara City College	Sierra College	Taft College	Skyline College
Shasta College	Southwestern College	Vista College	Ventura College
Solano Community College	West Hills College	West Los Angeles College	West Valley College
Victor Valley Community College			
Yuba College			

FEDAC #R139
Approval expires
June 30 1984

COMPLETER/LEAVER FOLLOW-UP FORM

NOTE: This report is authorized by law (20 USC 2312 and 20 USC 2391). While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely

1. What is your current educational status? (Check one.)
   _____ Currently attending school
   _____ Not currently attending school

2. What is your current employment status? (Check one.)
   _____ Employed (Includes all employment, even if below your qualifications; does not include full-time military service.)
   _____ Employed (Full-time military service.)
   _____ Unemployed (Not employed, but actively seeking employment.)
   _____ Not in the labor force (Not employed and not seeking employment because of choice, illness, full-time student status, retirement, pregnancy, or other such reason.)

NOTE: If you are currently employed, please answer the remaining questions. Otherwise, skip the remaining items.

3. Please provide the following information on your present job:
   Name of Company or Firm (If self-employed, please write self.)

   _____

   Company or Firm Mailing Address

   _____

   City State Zip Code

   _____

   Your Immediate Supervisor
   Last Name First Name M. I.

   _____

   PRESENT JOB INFORMATION:

   Job Title _____

   Job Duties _____

   _____

4. Is this job related to your field of vocational training?
   _____ Yes, it is directly or closely related.
   _____ No, it is only remotely related or is not related at all.

5. What is your current salary before deductions? (Do not add in overtime.)
   $_____ per _____

6. The salary in the preceding item is based on how many hours per week employment?
   _____ hours per week

Thank you very much for your cooperation. Please return this form in the enclosed envelope.

NCES Form 2404-5, Page 1 of 1

This report is authorized by PL 94-482 (20 USC 2391)

NAME _____

I.D. _____

PROGRAM TITLE _____

Form Approved
FEDAC #R139
Approval expires
June 30, 1984

EMPLOYER FOLLOW-UP FORM

NOTE: This report is authorized by law (20 USC 2312 and 20 USC 2391). While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely. No student identifiers will be forwarded to the Federal government.

1. VOCATIONAL TRAINING EVALUATION

Please rate the vocational training received by the individual in the following areas:

	Very Good	Good	Average	Poor	Very Poor
a. Technical knowledge	☐	☐	☐	☐	☐
b. Work attitude	☐	☐	☐	☐	☐
c. Work quality	☐	☐	☐	☐	☐
	(5)	(4)	(3)	(2)	(1)

2. OVERALL RATING

What is your *overall* rating of the vocational training received by this individual as it relates to the requirements of his or her job?

Very Good	Good	Average	Poor	Very Poor
☐	☐	☐	☐	☐
(5)	(4)	(3)	(2)	(1)

3. RELATIVE PREPARATION

As a result of this person's vocational training, how would you rate his or her preparation in relation to other employees in his or her work group who did not receive the same training?

☐ No basis for comparison
(5) ☐ Individual is better prepared
(3) ☐ Both are about the same
(1) ☐ Individual is less prepared

This report is authorized by PL 94-482 (20 USC 2391)

Due Dates for VEDS Reports

Reports are to be submitted by college through the District Office to the Chancellor's Office, California Community Colleges in accord with the Following:

STUDENT ENROLLMENT & COMPLETION REPORT

2404A	(Enrollment) Part A Sections I, II, & III Parts B, C, D, & E	August 1*
2404A	Part A Section IV (Completers)	November 1

TEACHER - STAFF REPORT

2404A-1	August 1

STUDENT COMPLETER/LEAVER FOLLOW-UP REPORT

2404A-7	June 1

EMPLOYER FOLLOW-UP REPORT

2404-8	August 1

*If automated, submit computer tape of entire 2404A Report by November 1

APPENDICES

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B. Examples of Instruments 85

C. Bibliography 97

D. Members of the SAM Consortium 99

APPENDIX A

SAMPLING IN FOLLOW-UP STUDIES

Two of the knottiest problems in follow-up studies are: (1) guaranteeing that those responding in the study are representative of the population under study, and (2) cost (in terms of money, personnel, and time) of making contacts with former students and obtaining appropriate information from them.

A carefully structured sampling plan can often help in solving both of these problems. The following pages offer some suggestions for use of sampling in conducting follow-up studies.

Some important points to note:

(1) For any sample to be representative of a population within desired probability limits, the sample must be selected randomly, i.e., every member of the population being sampled must have the same chance of being selected in the sample.

(2) Sample size is much more important than what percent it is of the population. A ten percent sample of ten is meaningless; a ten percent sample of 100,000 is wasteful. Note (from Table p. 3), for example, that a random sample of 600 gives results within $\pm$ 4%, even if the population were infinitely large. But also note, that for a small population of 100, the same accuracy requires a sample of 86.

(3) Simple random sample (see p. 88) is probably the most appropriate method for most follow-up studies.

(4) Proportional stratified random sampling (see p. 92) is useful in certain studies where a large heterogeneous group can be easily partitioned into subgroups, each of which is internally homogeneous (relative to the total).

Some advantages of stratified sampling are:

(a) provides data of known precision* for subpopulations.
(b) often more convenient to administer.
(c) may bring about gain in precision of estimates for the whole population.

Stratified sampling can occasionally be useful in broad scale follow-up studies, but its usefulness is severely limited when many differing majors are to be included, as is usually the case in occupational follow-up.

* precision will be less, however, as samples are smaller

(5) Tables on the following pages apply to data involving attributes (not measurements) of people involved (e.g., percent male, percent working, percent working in field, percent giving favorable response). If data involves measurement and produces averages (e.g., average monthly salary, average number of hours per week employed, average on a rating scale), sample sizes can be even lower than those indicated.

The items listed below are presented on the following pages:

Table for Selecting Sample Size

Procedure for Selecting a Random Sample

Procedure for Identifying Follow-up Response Bias

Table for "Check" Questions

Procedure for Extrapolating Sampling Results to Entire Population

Procedure for Selecting a Proportional Stratified Random Sample

TABLE FOR SELECTING SAMPLE SIZE

If your population is of size	and you want to guarantee* that your sample percent reflects your population percent within ±									then you should use a sample of size
	±1%	±2%	±3%	±4%	±5%	±6%	±7%	±8%	±9%	±10%
100	99	97	92	86	80	73	67	61	55	49
150	148	142	132	121	108	97	85	76	67	59
200	196	185	169	151	132	115	99	86	75	65
250	244	227	203	177	152	130	110	94	81	70
300	291	267	235	201	169	142	119	101	85	73
350	338	306	264	222	184	152	126	106	89	76
400	385	343	291	241	196	161	132	110	92	78
450	430	379	317	258	208	168	137	113	94	80
500	476	414	341	273	218	174	141	116	96	81
600	565	481	385	301	235	185	148	121	100	83
700	653	542	423	324	249	194	154	124	102	85
800	739	601	458	343	260	201	158	127	104	86
900	823	655	489	361	270	206	161	129	105	87
1000	906	706	517	376	278	211	164	131	106	88
1200	1067	801	565	401	292	219	169	134	108	89
1400	1222	885	606	421	302	225	172	136	110	90
1600	1372	961	641	437	310	229	175	138	111	91
1800	1516	1029	670	451	317	233	177	139	112	92
2000	1656	1092	696	462	323	236	179	140	112	92
2500	1984	1225	748	485	333	242	182	142	114	93
3000	2286	1334	788	501	341	245	184	143	115	94
3500	2566	1425	818	513	347	248	186	144	115	94
4000	2824	1501	843	522	351	251	187	145	116	94
4500	3065	1566	863	530	354	252	188	146	116	95
5000	3289	1623	880	536	357	254	189	146	116	95
6000	3693	1715	906	546	362	256	190	147	117	95
7000	4049	1788	926	553	365	257	191	147	117	95
8000	4365	1847	942	559	367	259	192	148	117	95
9000	4647	1896	954	563	369	260	192	148	118	96
10000	4900	1937	965	567	370	260	193	148	112	96
15000	5856	2070	997	578	375	263	194	149	118	96
20000	6489	2144	1014	583	377	264	195	149	118	96
25000	6939	2191	1024	587	379	264	195	150	119	96
Infinitely large	9604	2401	1067	600	384	267	196	150	119	96

For example, if you have a population of 5,000 people and you want the sample percent to be within 4% of the true population value, you should use a sample size 536.

* odds 19 to 1

SUGGESTED PROCEDURE FOR SELECTING A RANDOM SAMPLE

1. Determine the sample size desired (see Table).

2. Assign a number to each member of the population.

3. Divide the population size by the sample size and round down to nearest whole number, obtaining the "skip" number.

4. Select a "start" number (smaller than or equal to the "skip" number) by random procedure (e.g., take the next to the last digit of your telephone number).

5. Draw the sample by selecting the person assigned the start number and succeeding persons assigned numbers obtained by successively adding the "skip" number.

Example:

It is decided that sampling is appropriate for a population of 3,500 and accuracy is desired within $\pm$ 4%. From the table, the sample size is determined to be 513. Skip number is $3500 \div 513 = 6$. Take start number to be 5. Sample consists of those with numbers 5, 11, 17, 23, 29, 35, ... (every 6th until 513 obtained).

A simplified sampling scheme which is used in follow-up studies at some colleges is as follows:

Population	Sample
1 - 49	Every student
50 - 199	Every second student
200 - 399	Every third student
400 - 899	Every fifth student
900+	Every tenth student

SUGGESTED PROCEDURE FOR IDENTIFYING FOLLOW-UP RESPONSE BIAS
(Mail or Telephone)

1. Include two or three "check" questions* for which total population percentages are known, e.g., sex, ethnic, high school source, etc.

2. Compare response percents with population percents on "check" questions.

3. If "check" question differences are all within allowable limits (see Table), assume response sample is representative.

4. If one or more "check" question differences are outside allowable limits, response sample cannot be assumed representative and you should do one of the following:

   (a) make further efforts at increasing number of responses

   (b) prepare report, clearly indicating the nature of the bias and indicating that findings can not be generalized

If use of "check" questions is not possible, a telephone survey of random sample of non-respondents is advisable. Responses of this group can be compared with those of the previous respondents. For a discussion of recent experience using this technique, see "Representative Sampling", College of the Mainland Project Follow-up, Tarrant County Junior College District and Texas Education Agency, August, 1976.

* It is of course best to use as "check" questions characteristics which are related to those which are of concern in the follow-up study. The "check" procedures indicated do not guarantee lack of bias, but should aid in reducing it.

TABLE FOR "CHECK" QUESTIONS

If you mailed to (or phoned) this many people	and your response rate is 10%	20%	30%	40%	50%	60%	70%	80%	90%
50									5
100								5	3
150							5	4	3
200							5	3	2
250						5	4	3	2
300						5	4	3	2
350					5	4	3	3	2
400					5	4	3	2	2
450					5	4	3	2	2
500				5	4	4	3	2	1
600				5	4	3	3	2	1
700				5	4	3	2	2	1
800			5	4	3	3	2	2	1
900			5	4	3	3	2	2	1
1000			5	4	3	3	2	2	1
1200			4	3	3	2	2	1	1
1400		5	4	3	3	2	2	1	1
1600		5	4	3	2	2	2	1	1
1800		5	4	3	2	2	2	1	1
2000		4	3	3	2	2	1	1	1
2500		4	3	2	2	2	1	1	1
3000	5	4	3	2	2	1	1	1	1
4000	5	3	2	2	2	1	1	1	1
5000	4	3	2	2	1	1	1	1	0
10000	3	2	1	1	1	1	1	0	0

RESPONSE NOT ADEQUATE

then you can be reasonably* confident your response is unbiased if differences on your "check" questions are not greater than

* odds are 19 to 1

Example:

If total mailing is known to be 56% male, and you sent 250 questionnaires, a 60% response can be assumed to be unbiased (at least as far as sex is concerned) if the respondent percent male shows between 51% and 61% male (56%±5%).

PROCEDURE FOR EXPANDING FROM RESPONSE SAMPLE TO POPULATION

1. Compare population and response sample values on "check" questions. If any differences are outside allowable limits, extrapolation should not be made.

2. If response rate is less than 80%, "oversampling"* is recommended, e.g., additional people should be contacted. To determine the number of additional contacts, divide the original sample size by the response rate (to get total necessary) and subtract the number of responses already obtained.

   Example:

   If a sample of 600 produced a 75% response,

   a total of $\frac{600}{.75} = 800$ (or an additional 200)

   people should be contacted.

3. If "check" questions indicate lack of bias and number of responses is increased by "oversampling" (if necessary) percents and averages calculated in sample can be considered reliable estimates of the true population values.

* This obviously can not be done if initial contacts were made to the entire population. Also, for low response rates, the recommended oversampling can be rather large. Compromises based on judgment and experience will have to be made.

PROCEDURES FOR SELECTING A PROPORTIONAL STRATIFIED RANDOM SAMPLE

1. Decide on the stratification variables.
   e.g., 4 levels of major, received (or not) Associate Degree

2. Partition the population into appropriate strata.
   e.g., population of 5,000 stratified on degree and major might be:

Degree ?	Occup. Cl. 1	Occup. Cl. 2	Occup. Cl. 3	Non-Occup.	Totals
Yes	600	800	300	1300	3000
No	600	500	200	700	2000
Totals	1200	1300	500	2000	5000

3. Determine the proportion of the population in each stratum by dividing the number in the stratum by the total number in the population. e.g.,

Degree ?	Occup. Cl. 1	Occup. Cl. 2	Occup. Cl. 3	Non-Occup.	Totals
Yes	12	16	6	26	60
No	12	10	4	14	40
Totals	24	26	10	40	100

(figures now indicate percents)

4. Determine <u>total</u> sample size desired (from table or other considerations) e.g., assume in this example sample of 400 desired.

5. Determine stratum sample sizes by multiplying total sample size by percents obtained in step 3.

Degree ?	Occup. Cl. 1	Occup. Cl. 2	Occup. Cl. 3	Non-Occup.	Totals
Yes	48	64	24	104	240
No	48	40	16	56	100
Totals	96	104	40	160	400

6. Select sample for each stratum, using random sampling procedures.

APPENDIX B

Sample In-Class Questionnaire

To the Student:

The purpose of this questionnaire is three-fold: (1) to provide necessary information for program funding, (2) to help the college better meet student needs, and (3) to assist you in career planning. If you have completed this form in another class, it is not necessary to complete another one.

After you leave the college, you may receive a questionnaire. Your opinions are important! Please complete and return the questionnaire. Thank you.

- -

STUDENT PLANS FOR NEXT SEMESTER

Instructor _____

Course _____

Date _____

Name _____ College Major _____

Permanent Address _____

(Street) (City) (State) (ZIP)

Telephone Number ( ) _____

Indicate below relative (or friend) who will always know your address.

_____ _____

(Name) (Street) (City) (State) (ZIP)

Please check (and complete) any of the following that are appropriate. (To the best of your knowledge at this time)

____I plan to return to this college next term.

____I plan to transfer to _____(college).

____I plan to work full-time next term.

____I am fairly certain I will be employed with

_____

(Name and address of employer)

____I think I may have a job but am not sure.

_____

(Name and address of prospective employer)

____I have no prospects for employment at this time and I would appreciate assistance.

Sample Exit Interview Form

Student Withdrawal Form

Date _____

Name _____ I.D.# _____

Permanent Address _____
(Address) (City) (ZIP)

College Major _____

Have you been employed this semester? yes _____ no _____

If yes: 1/4 time___ 1/2 time___ 3/4 time___ full-time___

Do you plan to return to this college? yes____ no____ not sure____

Do you plan to transfer to a four-year college?
yes____ no____ not sure____

How well do you feel this college served you?
excellently____ adequately____ poorly____

Please check (one or more) reasons for your withdrawal:

___insufficient funds

___personal or family illness or accident

___transportation problem

___going to work full-time
(have you found a job yet? yes*___ no___)

___unhappy with schedule

___family moving away

___going to another school

___conflicting job hours

___not enough time to study

___personal, prefer not to state

___other (please describe) _____

_____

*If yes, please indicate:
Name of Employer _____

Address _____

Please write any comments on the back of this sheet.

86

Sample Follow-Up Alert Letter

Dear_____,

Our records indicate that you are no longer in attendance at this college.

We hope your stay has been worthwhile and hope you will return whenever our offerings can be of service to you.

Our former students are one of our most important sources of information. Your suggestions help us plan and improve programs. From time to time we send questionnaires to our former students. We hope that when you receive one of our requests you will respond promptly.

Meanwhile, we should like to ask that you keep us posted on any change of address. A change of address form is enclosed for you to complete and return.

We wish you well in your future endeavors.

Sincerely,

Sample Follow-Up Accompanying Letter

Dear Former Student:

The jobs at which our former students work change rapidly. The vocational-technical career programs offered by the college must keep up with the challenges of technological change.

(Name of College) has a continuing interest in our present and former students. We would like to know how you, as a former student, have progressed and how the courses which you took while attending the College prepared you for the occupation in which you are now employed.

Please take a few minutes to complete the enclosed, postage-paid form and return it promptly. You will be helping the students who are presently enrolled and those who will enroll at your college in the future. Your suggestions will be of great value to us as we evaluate our progress and plan new programs.

Thank you for your assistance. We encourage you to keep in touch with us and to take advantage of the services which are offered by the college.

Sincerely yours,

Sample Follow-up Questionnaire #1

Name _____ Present Address _____

Telephone Number _____ Social Security Number _____

What was your first job after leaving College? _____

Who was your first employer? _____

PLEASE ANSWER THE FOLLOWING QUESTIONS RELATING TO YOUR PRESENT JOB.

What is your present job? _____

Who is your present employer? _____

Do you work full-time? _____ Or part-time? _____

Do you work day shift? _____ Swing shift? _____ Graveyard? _____ Other? _____

How many hours per week do you work? _____

What is your hourly rate of pay? _____ What is your monthly rate of pay? _____

How long have you held this job? _____

How has your college training helped you in your present job: to get the job _____
to earn a promotion? _____ Other? _____
(please explain)

Were you given help by the Placement Office or the Instructional staff of the college in seeking your first job?

Yes _____ No _____ Please explain. _____

We would like to have you rate various aspects of your college experience as it relates to your present work. (Please check the appropriate column.)

	Excellent	Good	Acceptable	Poor
a. College instructional program				
b. Training facilities & equipment				
c. College work experience program				
d. College counseling services				

Which course or courses taken while in college have been most helpful to you in your work? Explain _____

_____

What additional training or skills would have been most useful for you to develop?

Explain: _____

_____

_____

Comments: Please provide any information about yourself, or the college, which you feel would be helpful to us in improving our occupational programs.

_____

_____

_____

_____

Sample Student Follow-Up Questionnaire #2

We are continually striving to provide you with worthwhile courses and services. One of the ways we use to achieve this objective is to SURVEY FORMER STUDENTS to determine whether or not we are living up to their expectations. YOUR NAME HAS BEEN SELECTED AT RANDOM and we are asking that you TAKE TEN MINUTES and respond to the questions below. Through your responses we can evaluate and improve our programs and services. Your responses are CONFIDENTIAL and will not be used individually but will be combined with other former students. Your responses will be used only for the purpose of this study and WILL IN NO WAY AFFECT YOUR STATUS with this college or any other college. Please complete the survey and RETURN IT IN THE SELF-ADDRESSED, STAMPED ENVELOPE WITHIN TEN DAYS. Thank you for your help.

(Space for mailing label with appropriate codes)

SECTION A - Everyone should complete this section.

What was your major while attending college? If you did not have a major, what was your career objective?

_____

1. What is your present employment status?
   (1)___Employed full time (30+ hours/week)
   (2)___Employed part time (29- hours/week)
   (3)___Not employed, but looking
   (4)___Not employed, not looking
   (5)___Temporary layoff
   (6)___Full time homemaker
   (7)___Military service
   (8)___Other_____

2. Which single statement best describes your present occupation?
   (1)___Not presently employed
   (2)___Employed in the occupation for which I prepared in college
   (3)___Employed in an occupation related to my preparation in college
   (4)___Employed in an occupation not related to my preparation in college
   (5)___Apprenticeship program, please specify_____

3. Are you presently attending college?
   (1)___No
   (2)___Yes, four-year college, full time
   (3)___Yes, four-year college, part time
   (4)___Yes, two-year college, full time
   (5)___Yes, two-year college, part time

   What is your major?_____

SECTION B - Complete this section only if you are presently employed. (If you are not now employed, go to SECTION C on the reverse side.)

What is your present job title or a brief description of responsibilities?

_____

4. Were you employed before attending college?
   (1)___No
   (2)___Yes, at a lower level than present
   (3)___Yes, at the same level as present
   (4)___Yes, at a higher level than presen

5. How long did it take you, after leaving college, to find your present job?
   (1)___Had the job before I left
   (2)___One month or less
   (3)___One month to three months
   (4)___More than three months

6. Which one of the following was the most helpful in getting your present job?
   (1)___Department head and/or faculty
   (2)___Parents, freinds, relatives
   (3)___Private employment agency
   (4)___Public employment agency
   (5)___College placement service
   (6)___Newspaper want ads
   (7)___Other_____

7. What is your current rate of pay?
   (1)___$1.99 or less per hour
   (2)___ 2.00 - 2.99 per hour
   (3)___ 3.00 - 3.99 per hour
   (4)___ 4.00 - 4.99 per hour
   (5)___ 5.00 - 5.99 per hour
   (6)___ 6.00 or more per hour

8. How well did this college provide you with occupational skills needed on your job?
   (1)___Very well
   (2)___Fairly well
   (3)___Not well
   (4)___Not at all

(Please continue on reverse side)

SECTION B-Continued

8A. Name one or more courses which you took which are of most help to you on your present job.

_____

_____

8B. Name one or more courses in your major, if any, which are of little help to you on your present job.

_____

_____

9. Do you plan to continue your college education?

___yes, toward a
(1)___Associate Degree
(2)___Bachelors Degree
(3)___Masters Degree
(4)___Yes, for job improvement purposes only
(5)___Yes, for personal interest only
(6)___Undecided
(7)___Definately not

SECTION C-Everyone should complete this section.

10. What was your primary objective in attending this college?

(1)___Preparation for getting a job
(2)___Improvement of existing "job skills"
(3)___Preparation for promotion
(4)___Preparation for a job in another field
(5)___Transfer to a four-year college
(6)___Personal interests
(7)___other_____

11. How much education was required to accomplish your objective?

(1)___Two-year Associate Degree Program
(2)___Certificate Program
(3)___Selected courses
(4)___other_____

12. To what extent has your objective been completed?

(1)___Fully completed
(2)___Partially completed
(3)___Not completed

13. Do you plan to pursue your objective further?

(1)___No
(2)___Yes, at this college
(3)___Yes, at another college
(4)___Undecided at this time
(5)___Other_____

14. What was your main reason for not continuing to attend this college?

(1)___Graduated or received a certificate
(2)___Completed needed courses
(3)___Transferred to another college
(4)___Found a job
(5)___Change of residence
(6)___Transportation problems
(7)___Financial reasons
(8)___Grade problems
(9)___Personal reasons
(10)___Other_____

15. Rate the following in relation to your overall experience at this college.

	EXCL	GOOD	FAIR	POOR
Classroom instruction	____	____	____	____
Content of courses	____	____	____	____
Help from instructors	____	____	____	____
Program planning	____	____	____	____
Career information	____	____	____	____
General opinion	____	____	____	____

SECTION D-We would greatly appreciate any comments or suggestions as to how we can be of more help to you and to other students. Please use the space below to tell us what things we should do which we are not presently doing or what things we should continue to do or what things we should discontinue doing.

Sample Letter to Employer

What's this?

A questionnaire which you need not fill out. We do, however, need your cooperation when I or a representative from my office phones you sometime in the next few days.

Why me?

Because our records show that you are the employer/supervisor of at least one person (listed below) who completed all or a significant portion of our Automobile Technology education and training program and who provided your name. Only you are in a position to judge the adequacy of this program in terms of job entry skill requirements.

Occupational Education is expensive -- to the student and taxpayer alike -- we can't afford to be wrong. The information you provide will be used to assure that future students will get the training you, our employers, need.

Remember, it's the program we want to evaluate -- not our former student.

You'll be hearing from us. Thanks in advance for your cooperation.

Sincerely,

Director of
Automotive Technology

Enclosure

Sample General Employer Follow-up Questionnaire

(Designed for mailed responses or mailed with telephone interview)

Job Title to which this evaluation applies: _____

Occupational Program being evaluated: _____

1. Please evaluate how effective our training program was in preparing our former student(s) for employment with your organization. Indicate whether the job skills items listed are "Essential," "Useful," or "Non-essential" to the job and your rating of our effectiveness in training for these skills. Space has been provided for you to list and rate training in specific skills for the job.

Essential	Useful	Non-essential		Excellent	Good	Acceptable	Below Expectations	Poor
____	____	____	a. Technical knowledge	____	____	____	____	____
____	____	____	b. Operation of equipment and instruments	____	____	____	____	____
____	____	____	c. Work quality	____	____	____	____	____
____	____	____	d. Writing skills	____	____	____	____	____
____	____	____	e. Verbal communications	____	____	____	____	____
____	____	____	f. Computational skills	____	____	____	____	____
____	____	____	g. Pre-employment procedures(application, interviews,personal appearance)	____	____	____	____	____
____	____	____	h. Orienting individuals to employment (punctuality, attendance, attitude)	____	____	____	____	____
____	____	____	i. Others (specify) _____	____	____	____	____	____
			_____	____	____	____	____	____

	Very Important	Moderately important	Of little importance	Un-important
2. What is your overall rating of the occupational training received by this individual as it relates to the requirements of the job?				
a. in making the hiring decision?	____	____	____	____
b. in making decisions about promotion?	____	____	____	____
3. How important is community college level training in relation to other qualifications you consider?	____	____	____	____

Sample General Employer Follow-up Questionnaire (continued)

4. As a result of the occupational training provided by this community college how would you rate this person's job preparation in relations to other employees in the work group who did not receive such training?

   No basis for comparison _____
   Individual better prepared _____
   Both are about same _____
   Individual is less well prepared _____

5. Would you hire another graduate from our program for a future job in your organization?

   _____Yes _____No

6. How many new employees do you hire for this job classification each year?

   _____

7. What, in your opinion, is the major strength of the occupational training provided by our college?

8. What, in your opinion, is the greatest need for improvement in the occupational training provided by our college?

9. What additional comments or suggestions do you have for our occupational training programs?

What we can do		What you can do	
Change course content	_____	Work experience stations	_____
Update equipment	_____	Field trips/speakers	_____
Provide retraining courses	_____	Donate equipment	_____
Other (specify)	_____	Provide advisory input	_____
_____		Other (specify)	_____
_____		_____	
_____		_____	

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Sample Specific Area Questionnaire to Employer

In order to provide students with the training needed to succeed in the electronics industry, it is most important that we obtain information from operational level personnel as to the adequacy of the present job preparation training program.

We are, therefore, asking for your evaluation of effectiveness of the training brought to the job by these former students. We would like to emphasize, our request is for information concerning the instructional program and is not a personnel performance report.

Please rate the following job-related areas as an indication of how well prepared students were for transition into your operation.

	Excellent	Good	Acceptable	Below Expectations	Poor	Not needed for job
1. Technical Knowledge Areas						
A. Basic Circuit Operation	___	___	___	___	___	___
B. Circuit Analysis and Application to Troubleshooting	___	___	___	___	___	___
C. Test Equipment Applications	___	___	___	___	___	___
D. Maintenance and Repair Operations and Skills	___	___	___	___	___	___
E. Interpretation and Application of Technical Data and Publications	___	___	___	___	___	___
F. Additional Comments						
2. General Knowledge Areas						
A. Computation Skills	___	___	___	___	___	___
B. Written Communication Skills	___	___	___	___	___	___
C. Verbal Communication Skills	___	___	___	___	___	___
D. Ability to Work with Others	___	___	___	___	___	___
E. Ability to Follow Directions	___	___	___	___	___	___
F. Exhibits Potential for Continued Job Growth	___	___	___	___	___	___
G. Based on Your Experience -- Would You Recommend Hiring Future Graduates From Our Program?		Yes ___			No ___	
H. Additional Comments:						

APPENDIX C

BIBLIOGRAPHY

1. Allen, David and Joseph A. Miller, Follow-Through and Follow-up, Division of Vocational Education, University of California, Los Angeles, 1972.

2. Arnold, Walter M., Vocational, Technical, and Continuing Education in Pennsylvania: A System Approach to State-Local Program Planning, Pennsylvania Department of Public Instruction, 1969.

3. California State Department of Education, A Proposed System for Reporting Job Placement Follow-Through Data, Sacramento, California: Bureau of Industrial Education,1967.

4. COPES Report, Occupational Education in Representative California Community Colleges ... Major Strengths, Critical Need for Improvement, Research Priorities, May 1973.

5. Davidson, Mildred, Career Graduates, A Profile of Job Experience and Further Study of Students With AAS Degrees, City Univ. of New York, N. Y., Office of Community College Affairs, Dec. 1968.

6. Five Year Study of Alumni From Asheville - Bumcombe Technical Institute 1966-67 to 1970-71, Appalachian Developing Institutions Consortium, Bureau of Higher Education, Washington, D. C. 1971.

7. Florida Community Junior College Inter-Institutional Research Council, A Source Book for Follow-up Study Questions, April 1972.

8. Follow-up Study of Bucks County Community College Graduates, 1965-1972,Bucks County Community College, Newtown, Pa, Office of Institutional Research, January 1973.

9. Follow-up Study: Non-Academic Attrition at Bucks County Community College, 1965-72, Bucks County Community Coll. Newton, Pa, Office of Institutional Research, Aug. 1973.

10. Goff, M. L., Selected Techniques for Formulating the Questionnaire, Mechanics, and Related Materials of a Follow-up Procedure with Post Secondary Vocational-Technical Graduates, University of Wyoming, 1966.

11. Greive, Donald E., Follow-up of Career Graduates Currently Employed, Cuyahoga Comm. Coll., Cleveland, Ohio, April 1970.

12. Hawaii Community College Vocational Technical Graduate Follow-up Studies, 1968-1971, Hawaii Univ., Honolulu Comm. College System, June, 1972.

13. Heinkel, Otto, An Assessment of the Marine Industry and Marine Technology Programs in Community Colleges in San Diego County, San Diego Community Colleges, 1972.

14. Ittner, Fred E., Project to Develop a Cost Benefit Model for Vocational Programs at College of Alameda, College of Alameda, 1972.

15. Little, J. Kenneth & Richard W. Whinfield, Follow-up of 1965 Graduates of Wisconsin Schools of Vocational, Technical, and Adult Education, Wisconsin Univ., Madison, Center for Studies in Vocational and Technical Education, June, 1970.

16. Mailey, Patrick J., Follow-up Study, Vocational Preparatory Students: A Proposed System for the State of Washington, Olympia, Washington: State Superintendent of Public Instruction, August, 1966.

17. Miller, Joseph Arthur, A Comparison Between an Automated Method and Two Conventional Methods of Data Collection for Vocational Student Follow-up Studies, UCLA Dissertation 1973.

18. Moraine Valley Community College (Ill.), Employer Evaluation of Occupation Graduates, September 1972.

19. Orange Coast College District, Project Follow-Through, Progress Reports #1-4, 1971.

20. Renzuli, Joseph S. & Carolyn M. Callahan, Development of a Follow-up Questionnaire for Community College Graduates, Final Report, Manchester Community College, Conn., June 1972.

21. Research Report on Five and Ten Year Follow-up Study of Connecticut State Vocational-Technical Schools Graduates of Classes 1958 and 1963, University Research Institute of Connecticut, Inc., March 1968.

22. Roberts, Frank, Technical-Vocational-Occupational Five Year Follow-up Study, 1967-1972, Antelope Valley College, 1973.

23. Sharp, Laure M. & Rebecca Krasnegor, The Use of Follow-up Studies in the Evaluation of Vocational Education, Washington, D. C.: Bureau of Social Science Research, May 1966.

24. SIS (Student Information System) Student Follow-up, System Manuals and Reports, Division of Occupational Research and Development, Department of Occupational & Technical Education, Texas Education Agency, Austin, Texas 78701, 1976.

25. Snyder, Fred A., et al, The Employment of Career Graduates, Harrisburg Area Comm. College, Pa., 1972.

26. Status of Spring 1971 Graduates, Portland Oregon Comm. College, 1972.

27. TRACE, A System for Student Follow-up, Management Handbook, Santa Barbara County Schools, in cooperation with the Vocational Education Section of the California State Department of Education, 1974.

APPENDIX D

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